

*Plans for Low-Cost*  
**POLE-TYPE HANGARS**



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American Wood Preservers Institute,  
111 West Washington Street,  
Chicago 2, Illinois

Price \$3.00





# How to Protect Your Aircraft on the Ground

More than 70,000 privately owned aircraft in the United States and Canada are important to national economy of the two nations, and they provide invaluable reserves in times of emergency.

Far too many of these planes are tied down in open fields, where they are exposed to damage by high winds, sleet, hail, tampering, and other hazards. Collectively, these ships represent a tremendous investment. They need protection when they are on the ground. This portfolio of pole-type hangar plans was prepared to provide shelter and security for aircraft at the lowest possible cost.

Pole-type buildings were selected after studying needs of the field, and after consultations with executives of the Aircraft Owners and Pilots Association, and other authorities. Pole-type buildings, because of their proved service records on farms, and in commercial and industrial fields, are today's best answer to high building costs.

## Four Hangar Sizes Included

This portfolio of Low-Cost Pole-Type Hangar Plans is published by the American Wood Preservers Institute for young plane owners, sports flyers, flying farmers, guides, operators of service planes, those who handle company-owned ships, airport owners, pole-building contractors and others. The designs and plans were prepared by Donald Patterson, a nationally known structural engineer with many years of successful experience, and author of the AWP's technical brochure, "How to Design Pole-Type Buildings," now in its second edition.

The portfolio includes plans for four basic hangar units of 35, 42, 52, and 62-ft. widths, to house and protect the most popular sizes of privately owned aircraft. The unit hangars may be built singly, or, because of their "T" shape, may be grouped in strip, ladder, or square layouts, as shown on General Plan, Sheet 1. Where hangars are grouped, unit costs are further reduced by using common inside walls. In this way from six to 16 units can be placed on an acre of airport land with a lane between rows of buildings.

## Pole-Type Buildings Are Popular

Pole-type buildings have made impressive, well deserved gains in recent years because they cost so little, go up so fast, and last so long. They cost so little because pressure preserved poles, set into the ground, replace conventional masonry foundations. The entire superstructure is "hung" on the supporting poles. The floor, if any is needed, is laid directly on the ground.

They go up fast because no masonry foundations are needed. Poles are merely set in holes in the ground. Practically no framing is required. Stock lengths of structural lumber are overlapped without cutting or fitting. Wall and roof coverings are applied in large sheets.

They last so long because pressure treated poles, in direct contact with the ground, are good for 40 to 50 years and more, even in areas of very severe decay and termite exposure.

Because poles are securely anchored in the ground, the buildings they support have high resistance to uplift forces of strong winds. If desired, they can be dismantled and moved.

## Do-It-Yourself vs. Building Professional

Thousands of American and Canadian farm families have demonstrated that anyone even with limited, semi-skilled building experience can erect a pole-type building. Some of their service structures are surprisingly large and well equipped. The present trend, however, is to use more professional pole-type building contractors. Many contractors with long experience in building have entered the pole-type field. Some of them erect 100 or more pole-type buildings a year. Their operations frequently extend over large areas.

The following illustrated sheet tells how to stake out and erect a pole-type hangar, how to square corners, set poles in place, align them, apply girts, purlins, wall and roof covering materials. Any mechanically minded man who knows how to read blueprints, and how to use his head and hands, can do the job. For those who lack experience, a reliable professional contractor who can read blueprints like a newspaper, is recommended.

A feature of each hangar is the light-weight, very sturdy wood truss used to provide the wide, clear span over its doorway. The trusses have been carefully designed, and are based on years of successful performance. Details on accompanying plan sheets show how to assemble these lightweight wood trusses with Teco ring connectors. Truss assembly is a relatively simple job for an experienced contractor, or trusses can be bought, fully fabricated, from a truss manufacturer.

## How to Use Construction Alternates

On the accompanying plans and material lists some items are shown by brand name, usually with the qualifying words, "or equal." Even where no names are shown, it frequently is feasible and safe to use construction alternates, according to local building practices or what is available from local sources of supply. The plans and lists, as written, call for materials and equipment with long, proved service records.

In the case of doors and hardware a number of alternates, including upward acting types, can be used equally well. A number of wall and roof coverings may be used. The basic plan shows wire partitions between grouped units. Exterior wall and roof coverings may include corrugated galvanized steel sheets, corrugated aluminum, cement-asbestos board, exterior type plywood, tempered hardboard, plastics, or other materials.

Hangar owners may elect to investigate glued-nailed and box beams being developed by the Douglas Fir Plywood Association, 1119 "A" Street, Tacoma, Wash. The Association currently is establishing an organization of truss builders whose output will be engineered, tested, and supervised to assure high standards of strength.

## About Wood Preservation

Accompanying plans and material lists refer to pressure preserved poles, lumber, or timber. A plane owner who does not know construction may be uninformed about the necessity for using pressure preserved wood that will be in contact with or close to the ground. He should know that, in spite of what anyone may attempt to tell him, brushing, dipping or spraying with an approved preservative will not appreciably lengthen the

useful life of his hangar . . . in fact, may make it a costly venture. It costs less to use treated wood.

## Here's why:

Examine the next wood telephone or lighting pole that you see. Notice how checks may have opened in the sides. Cracks that develop after an untreated or superficially treated pole is in service open the way for wood-destroying decay fungi and termites to go in the openings and begin work. Only pressure that forces an approved preservative deep into the wood and diffuses it evenly will insure *lasting* protection. Utility poles pressure treated with an approved preservative consistently last 50 years or more. The same type poles, less exposed when supporting a hangar, are expected to last 60 years or more. Incidentally, pressure treated railway ties, according to the Association of American Railroads, save the country's railways \$3¼ million a day in replacements and labor costs. Structural members of hangars, such as siding and girts, should be pressure treated to a point two or three feet above the ground.

And in drywood termite areas, a narrow band that begins in California, north of San Francisco, extends southward along the Coast eastward across the Mexican border states, and Gulf states, including all of Florida, and north along the Atlantic coast line to Norfolk, Va., all of the lumber used should be pressure treated if complete protection is desired.

A list showing the names and addresses of pole-type building contractors is enclosed with this portfolio of plans. Their names have been obtained from reliable sources, and are shown solely for the convenience of plane owners who may wish to consult them or obtain estimates. The AWP's accepts no responsibility for their performances as contractors.

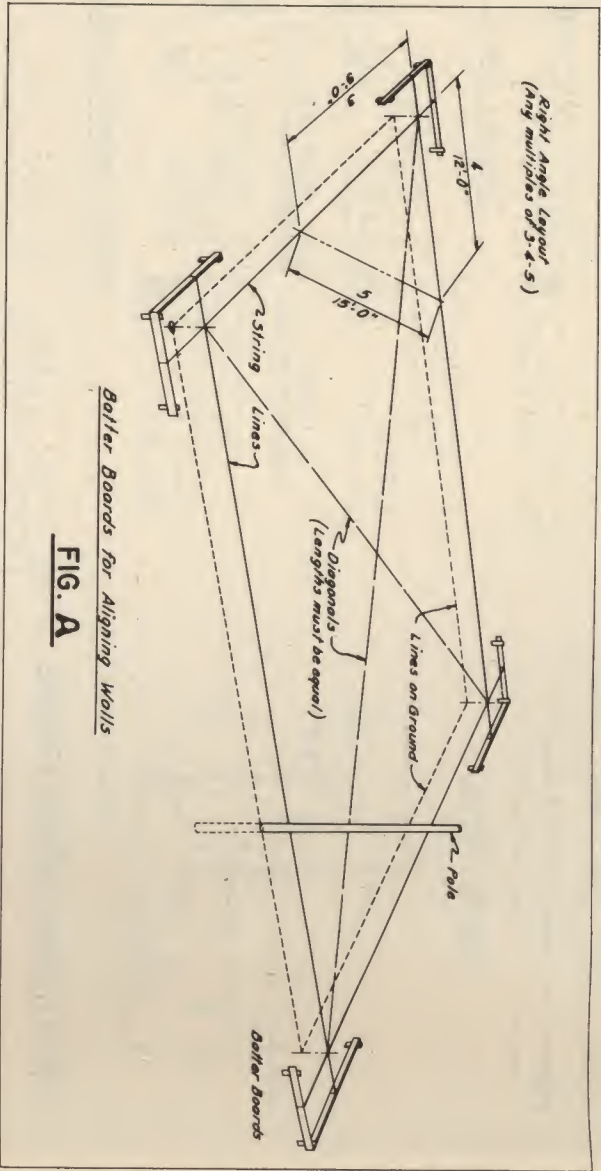
## Your Plane Deserves Protection

Pole-type buildings are performing outstanding service for farmers, warehouse operators, manufacturers, highway departments, and other owners throughout the United States and Canada. Until these sturdy, durable, low-cost buildings were available, millions of dollars worth of costly machines stood in the open, rusting away and shortening their useful lives. Thousands of costly machines and pieces of equipment now are protected from the weather in pole-type buildings. As a result, the machines last longer and operate better because they are protected from undue exposure.

What pole-type buildings have done for farmers and other machinery owners they can do equally well for owners of private aircraft. They can protect and extend the useful life of your ship, prevent unnecessary losses from exposure, reduce causes of failure in the air, and save money for you. And what is most important, pole-type hangars cost less, go up faster, last longer than any alternate type of building you can construct and own. Your plane will be safer and you will be happier when it is safely and securely housed in a sturdy, low-cost, pole-type hangar.

**American Wood Preservers Institute**  
111 West Washington Street  
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**FIG. A**

# Pole-Type Hangars Are Easy to Build

Staking out and erecting pole-type hangars is a simple task that requires no special skills. Batten boards set back from the building corners with sufficient clearance so they will not be disturbed during construction provide reliable reference points that may be maintained until the building is completed. Lines from nails in these boards can be stretched along each wall, so that post or pole holes can be spotted in true alignment. (Fig. A)

Right angle corners, where a transit is not available, can be laid out conveniently and accurately with a tape, by forming a triangle with sides which are any multiple of 3, 4 and 5 feet (Fig. A). The building outline indicated by the guide lines can be checked by measuring the diagonals. The diagonals must be equal if the plan is square or rectangular.

Holes in which the poles are to be set are spotted by measuring along the guide lines. Centers of the holes should be approximately 6 inches in from the wall, so outside of the pole columns can be set flush with the guide line.

Holes should be large enough to permit shifting the poles laterally so their outside surfaces can be properly aligned.

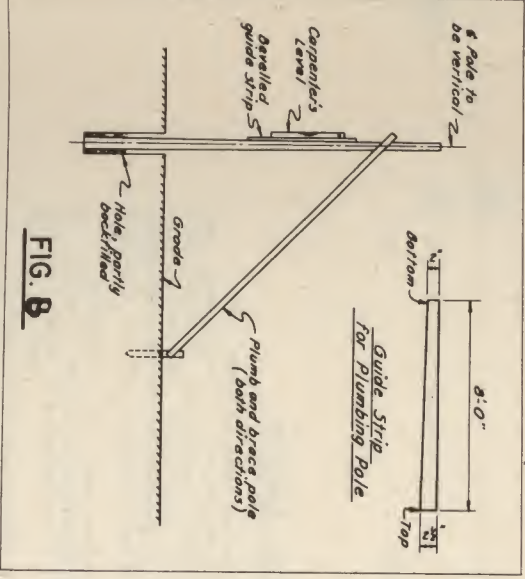
Holes are most conveniently bored with a truck mounted auger, such as is used for setting telephone or utility poles. Where this equipment is not available, holes can be dug by hand.

In very poor soils, it may be desirable to set poles somewhat deeper than is indicated on the

plans. A concrete mat or pad under the pole butt will not increase the bearing, unless the concrete mat is thick enough to withstand punching shear of the pole, and bending in the mat. The mat should never be less than 12 inches thick, and thicker for transmitting heavier loads to the soil.

The same quantity of concrete placed as backfilling around the pole is a more effective method of increasing bearing capacity. The enlarged area of the base permits greater vertical loads and the enlarged diameter or breadth of the encased pole provides greater resistance to slight rotation from horizontal forces.

When the poles are properly aligned, enough backfill is placed to prevent their shifting laterally out of line, but not enough to prevent rotating them for plumbing. A bevelled guide or template along the outer face permits bringing the center of the pole into vertical position with the plumb bubble of a carpenter's level. A temporary brace (Fig. B),



**FIG. B**

from the top of the pole to a stake, will secure the pole until it is backfilled and tamped in place.

Horizontal girts for nailing the side material are lapped at the wall columns, as shown in Fig. C. Rafters and purlins, except in a few cases which require butt joints, also are lapped. Grade level should be marked on each pole as reference points for height measurements.

The straightest poles should be selected for corners and for truss supports.

All poles, and lumber used in contact with, or near, the ground should be pressure treated with standard preservatives, in conformity with standards of the American Wood Preservers' Association. Purchase orders for treated poles and lumber may be simplified by stipulating the quantity of

acceptable preservative per cubic foot of wood, and demanding that treatment conform to AWPA Standards — C1 and C2 for lumber and sawed timber, C1 and C4 for treatment of poles.

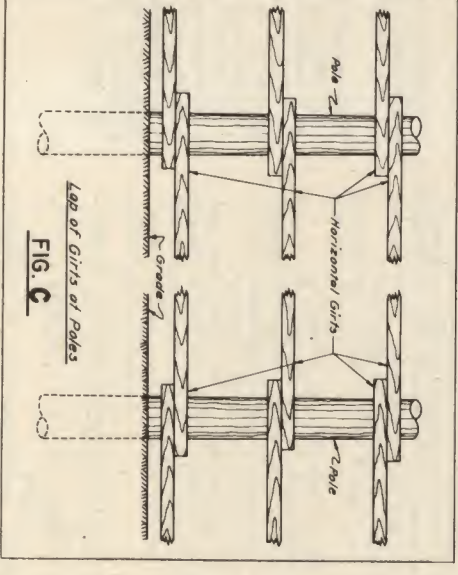
## Retentions of Preservatives

A net retention of 8 lb. of creosote per cu. ft. of wood, or 0.4 lb. (dry chemical) of pentachlorophenol should be specified for both lumber and poles used in pole-type buildings under usual conditions.

Where a standard water-borne salt is used, the following net retentions for salt preservatives should be specified:

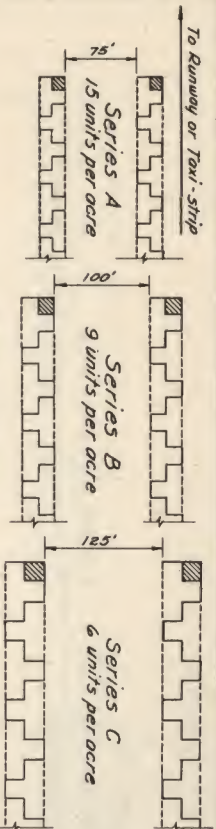
Preservative	For lumber and structural timber not in contact with the ground	For poles or structural timber in contact with the ground
Acid copper chromate (ACC)	.50	.75
Celcure*		
Ammoniacal copper arsenite (ACA)	.30	.50
Chemnite*		
Chromated copper arsenate (CCA)	.35	.75
Endalith*		
Greensalt		
Chromated zinc arsenate (CZA)	.50	1.00
Boliden Salts*		
Chromated zinc chloride (CZC)	.75	1.15
Copperized chromated zinc chloride (CuCZC)	.75	1.15
Fluor chrome arsenate phenol (FCAP)	.35	.55
Tanalith		
Wolman Salts*		

\*Registered U. S. Patent Office.

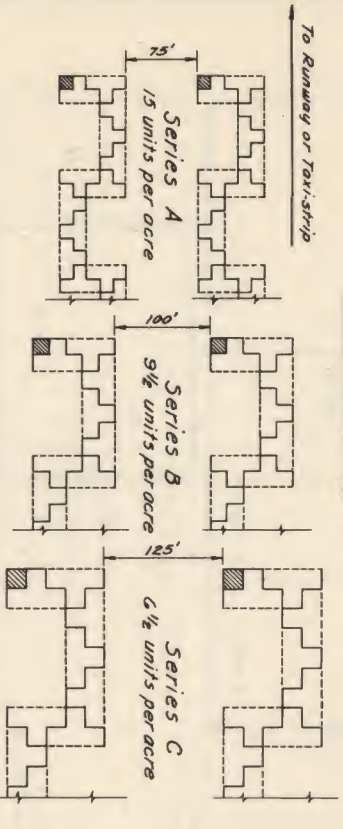


**FIG. C**

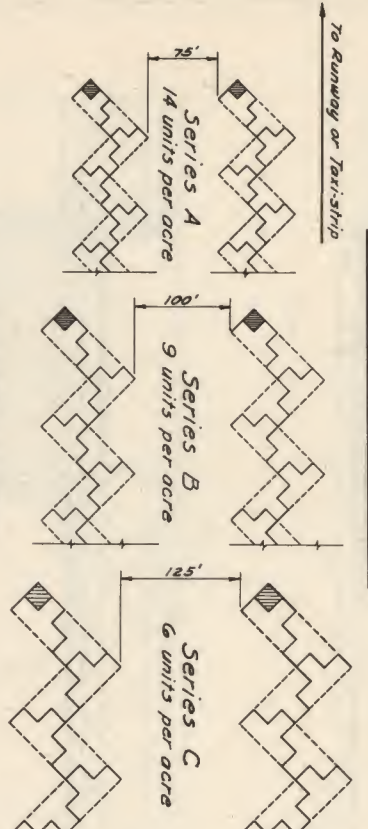




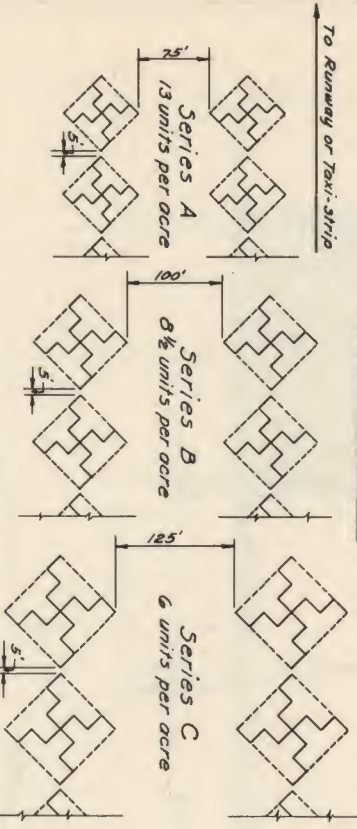
STRIP LAYOUT



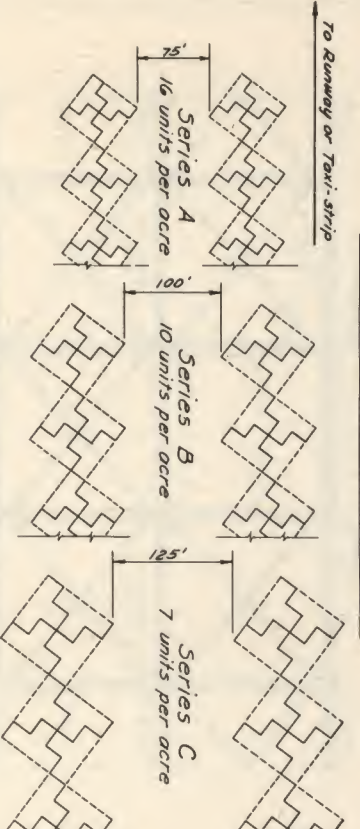
MODIFIED STRIP LAYOUT



LADDER LAYOUT



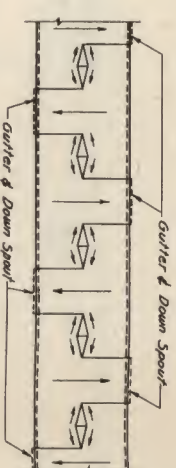
SEPARATED SQUARES LAYOUT



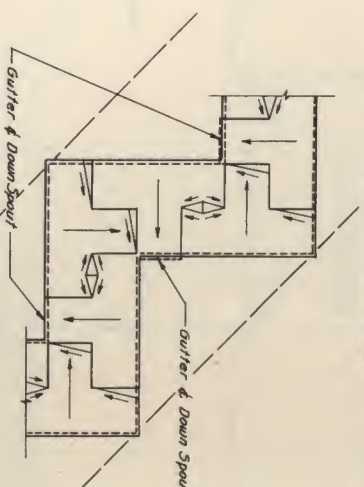
CONNECTED SQUARES LAYOUT

POSSIBLE LAYOUTS OF MULTIPLE UNITS

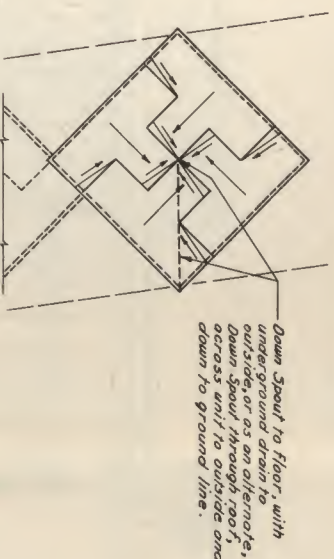
SCALE 30 0 100 200 FT.



STRIP LAYOUT



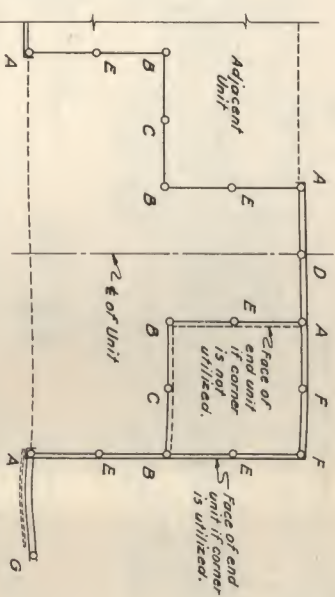
MODIFIED STRIP OR LADDER LAYOUT



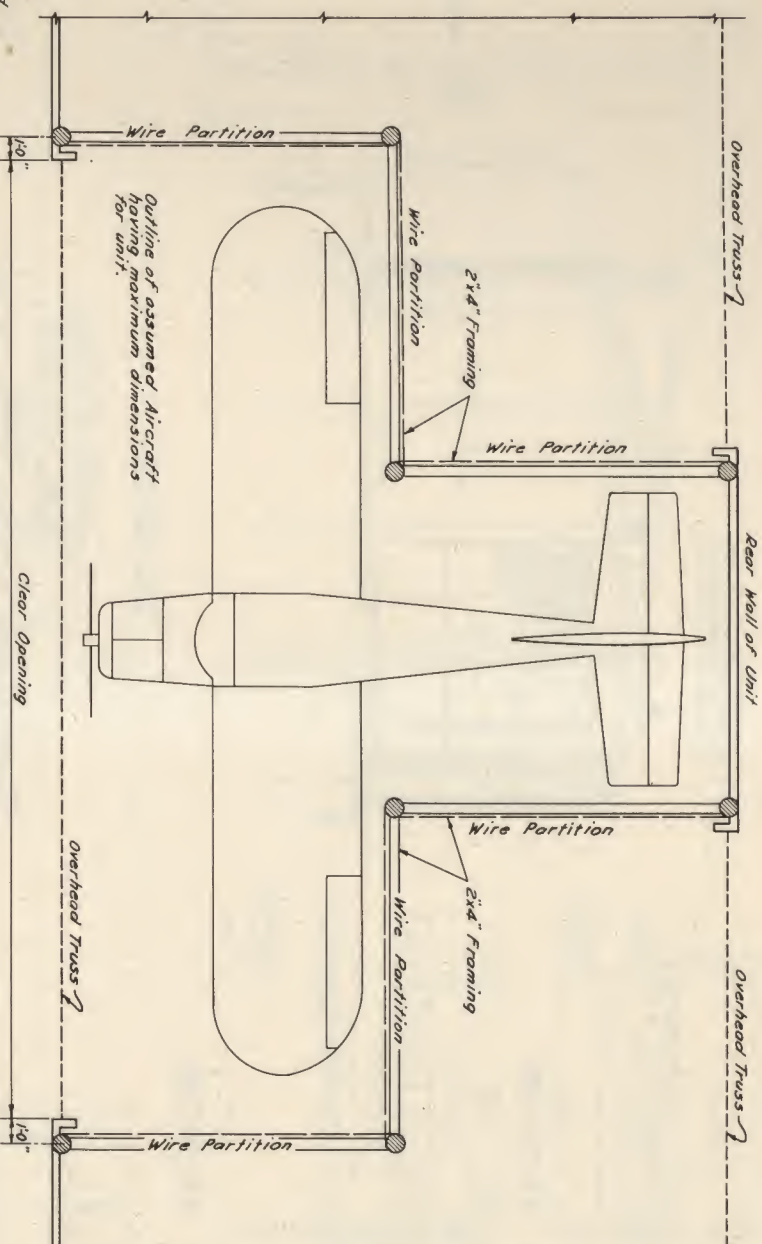
SQUARES LAYOUT

ROOF DRAINAGE PATTERNS

Series A 0 10 20 30 40 50 Ft.  
Series B 0 10 20 30 40 50 Ft.  
Series C 0 10 20 30 40 50 Ft.



POLE DESIGNATION



PLAN OF UNIT HANGAR

## GENERAL NOTES

Live load has been assumed of 30 pounds per square foot. The design may be modified downward for locations in the extreme south and southwest. Conversely, the design should be modified upward for locations in the northerly portions of New England and of the Great Lakes region.

Wind load has been assumed of 20 pounds per square foot of exposed surface, which is a common code requirement for buildings under 50 feet in height.

Loads on the top chords of trusses have been assumed to be uniformly distributed and the chord members designed for bending and direct compression.

Comber for dead load is to be introduced into the trusses by raising the bottom chords at the center, during fabrication, the amounts shown on the plans.

Pole embedment is based on the Rutledge "Chart for Embedment of Posts with Overturning Loads" of the Outdoor Advertising Association of America. The allowable average soil stress has been assumed of 2500 p.s.i. This is an average soil condition. If it is not attainable at the site, either the depth of embedment should be increased or the embedded portion of the pole should be encased in concrete, a minimum of 4" thick. To increase the nominal width of the pole.

Series "D" Units, for aircraft with a maximum wing spread of 30 ft., may be constructed on strip layouts, only. When built on strip layouts, with 60 ft. wide taxiways between, the units will average 19 per acre.

## SPECIFICATIONS

Lumber shall be of a grade having minimum allowable working stresses as follows:-

1200 p.s.i. on extreme fiber in bending.

1200 p.s.i. in tension

880 p.s.i. in compression, parallel with the grain.

Modulus of Elasticity - 1,600,000 p.s.i.

Design and workmanship shall be in accordance with "National Design Specification for Stress-Grade Lumber and Its Fastenings," as recommended by National Lumber Manufacturers' Association.

Poles shall be of Douglas fir, Southern Pine, Western Hemlock, Western Larch or other treatable species, in accordance with "American Standard Specifications and Dimensions for Wood Poles," of the American Standards Association.

In addition, sweeps shall be limited to one plane.

Connectors shall be Timber Engineering Company "Teco" split rings, of the sizes given on the plans.

All Poles, and lumber used in contact with, or near, the ground should be pressure treated with standard preservative in conformity with standards of the American Wood Preservers Association.

Purchase orders for treated poles and lumber may be simplified by stipulating the acceptable preservative per cubic foot of wood, and demanding that treatment conform to AWPA Standards-C1 and C2 for lumber and sawed timbers, C1 and C4 for treatment of poles.

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## POLE-TYPE UNIT HANGAR

FOR

## SMALL AND MEDIUM SIZE AIRCRAFT

## GENERAL PLAN

AMERICAN WOOD PRESERVERS INSTITUTE  
111 WEST WASHINGTON ST., CHICAGO 2, ILL.  
DECEMBER 1958.

SHEET 1 OF 11











## BILL OF MATERIALS

**FOUNDATION**

<i>Item</i>	<i>Quantity</i>
Concrete, Plain, 2500 p.s.i.	8 cubic
Guides - 3" x 5" x 6'-6" long (includes 20-1/2" x 10" bars)	620 lbs.
Alternate Guides:-	
Pressure treated timber- 2-3in. x 5in. (42'-0" long) (Sproger Joins)	210 FBM
Do/1's - 62- 1/2" x 13" McH. Bolts, 50' Hds. & Nut's, 2 Cnl Washers	55 lbs.
One End Uni- additional materials	
Concrete, Plain, 2500 p.s.i.	1 1/2 cubic

## FRAMEWORK

Item	Quantity				
Wood Poles, A 54 Class 5, 25 ft. long, Dia. @ Tip 6" Min.	6 each				
Schedule - 42 Ft. Truss - Required	1 Truss				
Member	No.	Size	Length	Cut from	From
Top Chord - center section	2	3x10	21'-0"	2 @ 21'	110
Top Chord - end sections	4	3x10	11'-1"	4 @ 12'	120
Bottom Chords	4	2x10	22'-0"	4 @ 22'	180
End Diagonals	4	3x10	7'-4 1/2"	2 @ 16'	80
Intermediate Diagonals	14	3x6	7'-1"	7 @ 16'	164
Verticals	8	3x6	5'-8"	4 @ 14'	84
Center Vertical	1	3x4	5'-6"	1 @ 6'	6
Top Chord Splice Plates	3	3x10	3'-0"	1 @ 10'	45
Top Chord Splice Filler Plates	2	3x10	3'-0"		
Bottom Chord Splice Plates	2	3x10	6'-1"	1 @ 10'	45
Bottom Chord Splice Filler Plates	2	3x10	2'-9 1/2"		
Top Chord Filler Plates	28	3x10	0'-6"	1 @ 18'	45
Bottom Chord Filler Plates	6	3x10	0'-6"		
Pole Top Plates (Clears)	4	3x6	1'-8"	Verticals -	350 FBM
Hardware	No.	Weight			
4" Dia. Split Rings	104	79 Lbs			
2 1/2" Dia. Split Rings	12	4 "			
3/8"x13" Wch. Bolts, Hex Hd. & Nut	25	51 "			
3/8"x15" Wch. Bolts, Hex Hd. & Nut	25	57 "			
Washers - 3/4"x3"x3/16" (100); 2"x2"x1/8" (12)	120	56 "			250 Lbs.
Plates					
Member	No.	Size	Length	Cut from	From
Center Plates	4	3x14	15'-0"	4 @ 16'	224
Pole Top Plates (Clears)	4	4x6	1'-2"	1 @ 6'	12
Rear Plates	2	3x12	15'-0"	2 @ 16'	96
Filler Plates (On Truss)	4	3x6	1'-0"		
Hardware	No.	Weight			330 FBM
2 1/2" Dia. Split Rings	8	3 Lbs.			
3/8"x15" Wch. Bolts, Hex Hd. & Nut	8	18 "			
Washers - 3/4"x3"x3/16" (16); 2"x2"x1/8" (12)	20	10 "			
1/4"x15" Wch. Bolts, Hex Hd. & Nut	6	6 "			40 Lbs.
Horizontal Bracing					
Member	No.	Size	Length	Cut from	From
Transverse Struts	4	3x6	14'-6 1/2"	4 @ 16'	96
Strut-Top Chord Filler Plates	4	3x6	0'-10"		
Transverse Struts	4	3x6	14'-3 1/2"	4 @ 16'	96
Strut-Bottom Chord Bearing Plate	4	3x6	1'-4"		
Strut-Strut-Bottom Chord Bearing Plates	2	3x6	5'-4"	1 @ 14'	21
Strut Bearing Plates	2	3x6	1'-4 1/2"		
Strut Bearing Plates	2	3x6	1'-2"	1 @ 14'	21
Strut Bearing Plates	2	3x6	1'-3"		
Diagonal Braces	6	2x6	0'-5 1/2"	6 @ 20'	120
Diagonal Brace Joists	3	2x6	1'-0"	1 @ 20'	20
Strut Bearing Plates	4	2x6	1'-2"	1 @ 12'	12
Strut Bearing Plates	4	2x6	1'-4 1/2"		
Strut Splice Plates	4	2x6	3'-1"	1 @ 14'	14
Strut Bearing Plates	4	2x6	0'-5 1/2"	Cut from	
Strut Bearing Plates	2	3x6	0'-5 1/2"	Cut from -	400 FBM
Hardware	No.	Weight			
3/8"x11" Wch. Bolts, Hex Hd. & Nut	11	20 Lbs			
3/8"x13" Wch. Bolts, Hex Hd. & Nut	28	55 "			
3/8"x15" Wch. Bolts, Hex Hd. & Nut	2	5 "			

## FRAMEWORK

(continued)

Item		Quantity
<b>Hardware (Continued)</b>		
3/8"x1/8" Mch. Bolts, Hex Hd. & Nut	No.	Weight
Washers, 3/8"x3/8"	110	55 "
One End Unit - (corner utilized) additional materials		
Wood Poles, A5A - Class 5, 20 Ft. long, Dia @ Top - 6" Min.	2 Each	
<b>Poles</b>		
Member	No.	Size
Center Poles (Decked / piece)	1	3"x14 15'-0" 1 @ 16' 56
Pole Top Plates (Cleats)	4	4"x6 1'-2" 1 @ 6' 42
Rear Plates	2	3"x12 15'-0" 2 @ 16 96
Auxiliary Poles (for Door Track)	2	3"x12 12'-0" 2 @ 12 72
<b>Hardware</b>		
2 1/2" Dia. Split Rings	No.	Weight
1/2"x1/8" Mch. Bolts, Hex Hd. & Nut (Deduct)	3	3 -3 "
1/2"x1/8" Mch. Bolts, Hex Hd. & Nut	4	4 "
3/8"x1/8" Mch. Bolts, Hex Hd. & Nut	2	5 -
Washers, 3/8"x3/8" (4) ; 2"x2 1/2" (2)	6	3 "
One End Unit - (corner not utilized) - additional materials		
Wood Poles, A5A - Class 5, 20 Ft. long, Dia @ Top - 6" Min.	1 Each	
<b>Poles</b>		
Member	No.	Size
Center Poles (Decked / piece)	-	3"x14 15'-0" Deduct -56
Pole Top Plates (Cleats)	2	4"x6 1'-2" 1 @ 4' 9
Rear Plates	2	3"x12 15'-0" 2 @ 16 96
Auxiliary Poles (for Door Track)	2	3"x12 12'-0" 2 @ 12 72
<b>Hardware</b>		
2 1/2" Dia. Split Rings	No.	Weight
1/2"x1/8" Mch. Bolts, Hex Hd. & Nut	2	2 "
1/2"x1/8" Mch. Bolts, Hex Hd. & Nut (Deduct)	3	3 -3 "
<b>WALLS AND ROOF</b>		
<b>Hardware (Continued)</b>		
1/2"x1/8" Mch. Bolts, Hex Hd. & Nut (42 Ft. Truss)	6	5 lbs.
3/4"x3/8" Mch. Bolts, Hex Hd. & Nut (42 Ft. Truss)	2	3 "
<b>WALLS AND ROOF</b>		
Item	Quantity	
Member	No.	Size
5/16s	1	2"x4 16'-0" 1 @ 20 13
3/16s	1	2"x4 2'-6" 36
Plates	3	2"x4 16'-0" 3 @ 18 36
Plates	3	2"x4 2'-0" 5 @ 16 54
Studs	15	2"x4 8'-0" 5 @ 20 13
Studs	5	2"x4 4'-6" 5 @ 20 13
Studs	5	2"x4 4'-0" 1 @ 20 13
Traming for Wire Partitions	8	2"x4 12'-6" 8 @ 14 75
Traming for Wire Partitions	8	2"x4 13'-6" 8 @ 14 36
Traming for Wire Partitions	8	2"x4 12'-3" 8 @ 14 36
Traming for Wire Partitions	21	2"x4 4'-0" 7 @ 12 56
Rafter's	42	2"x8 16'-0" 42 @ 16 96
Cladding	40	1"x3 Various 8 @ 14 26
Sheathing	12	1"x- Random Lengths 920
Inside Door Enclosure	12	1"x3 16'-0" 12 @ 18 54
Inside Door Enclosure	12	1"x3 2'-0" 560
Drop Siding - 1120 Lin. Ft.	-	1"x6 Random Lengths 560
Drop Siding - 1120 Lin. Ft.	-	1"x6 56 Lin. Ft. 4 @ 14 28
Building Paper (under Drop Siding)	600	30 Ft. 2 @ 10 20
Roll Roofing - 35 Lb.	15	Rolls 14 Lin. Ft.
3" Dia. Galvanized Metal Downspout (with L @ lower end)	1	

## WALLS AND ROOF

(continued)

Item	No.	Weight	Quantity
Hardware			
1/4", 4 1/2" Nuts, Bolts, 3/8" Hex & Nut, 2 Washers	84	30 Lbs.	30 Lbs.
One End Unit (corner utilized) - additional materials			
Member	No. Size	Length	Cal From PM
Sill Support-pressure treated lumber	2 4x4	3'-0"	1 @ 6'
Sills	8 2x4	7'-0"	4 @ 14'
Sills	2 2x4	14'-0"	2 @ 14'
Plates	12 2x4	7'-0"	6 @ 16'
Plates	3 2x4	14'-0"	3 @ 14'
Plates (Deduct 5 pieces)	-	2x4	4'-0" Deduct -13
Studs	28 2x4	8'-0"	14 @ 16'
Studs	10 2x4	9'-6"	5 @ 16'
Studs		10'-7 1/2"	
Studs	8 2x4	7'-6"	4 @ 14'
Studs		10'-5 1/2"	
Studs	6 2x4	5'-6"	2 @ 16'
Roofers	12 2x4	16'-0"	12 @ 16'
Bracing	20 1x3	Horizous	2 @ 14'
Sheathing	1x-	Random length	260
Drop Siding - 14.60 Lin. Ft.	-	x 6"	Random length 730
1x4 1/2" between rafters (cal from 1/2")	-	1 x 6	16 Lin Ft. 1 @ 16'
Building Paper (under Drop Siding)			
Roll Roofing - 55 Lb.			
4' galvanized Metal Eaves trough			
1/2", 1/4", 3/8" Nuts, Bolts, Hex Nut, 1/2" Nut, 2 Washers	48	20 Lbs.	20 Lbs.
One End Unit (corner not utilized) - additional materials			
Member	No. Size	Length	Cal From PM
Sill Support-pressure treated lumber	1 4x4	3'-0"	1 @ 3'
Sills	8 2x4	7'-0"	4 @ 14'
Sills	2 2x4	14'-0"	2 @ 14'
Plates	12 2x4	7'-0"	6 @ 14'
Plates	3 2x4	14'-0"	3 @ 14'
Plates (Deduct 5 pieces)	-	2x4	4'-0" Deduct -13
Studs	24 2x4	8'-0"	12 @ 16'
Studs	8 2x4	9'-6"	4 @ 16'
Studs		10'-7 1/2"	
Studs	8 2x4	7'-6"	4 @ 16'
Studs	8 2x4	7'-6"	4 @ 14'
Studs		10'-5 1/2"	
Sheathing	-	1x	Random length 30
Drop Siding - 15.40 Lin. Ft.	-	x 6"	Random length 770
4' galvanized Metal Eaves trough			
3" Dia. Galvanized Metal Downspout (with L @ lower end)			
Roll Roofing - 55 Lb.			
Building Paper (under Drop Siding)			
Alternate Guides :-			
Member	No. Size	Length	Cal From PM
Sill Support-pressure treated lumber	1 4x4	3'-0"	1 @ 3'
Sills	2 2x4	16'-0"	2 @ 16'
Sills	1 2x4	2'-6"	
Alternate Siding :-			
Corrugated galvanized, steel metal, 26 gauge - 26 x 6'-0"			45 Sheets
Member	No. Size	Length	Cal From PM
Girls	6 1x4	16'-0"	6 @ 16'
Girls	9 1x4	14'-0"	9 @ 14'
Girls	2 1x4	12'-0"	2 @ 12'
One End Unit - additional materials			
Corrugated galvanized, steel metal, 26 gauge - 26 x 6'-0"			72 Sheets
Member	No. Size	Length	Cal From PM
Girls	8 1x4	16'-0"	8 @ 16'
Girls	13 1x4	14'-0"	13 @ 14'

## WALLS AND ROOF

(Continued)

Item	Quantity
<u>Alternate Siding</u> :- (Continued)	
Corrugated Aluminum Siding, 20 gauge, -35"x6'-6"	30 sheets
Member	No. Size Length Cut from BDM
Girts	6 1"x4 16'-0" 6 @ 16' 32
Girts	9 1"x4 14'-0" 9 @ 14' 42
Girts	2 1"x4 12'-0" 2 @ 12' 8
4" Aluminum Eavestrough	30 fpm
12% lin.ft	
3" Dia Aluminum Downspout (with L @ lower end)	14 lin.ft
<u>One End Unit</u> - additional materials	
Corrugated Aluminum Siding, 20 gauge, -35"x6'-6"	50 sheets
Member	No. Size Length Cut from BDM
Girts	7 1"x4 16'-0" 7 @ 16' 37
Girts	3 1"x4 14'-0" 3 @ 14' 6.1
100 fpm	
<u>One End Unit</u> (corner utilized) additional materials	
4" Aluminum Eavestrough (corner utilized or not utilized)	16 lin.ft
3" Dia Aluminum Downspout (corner not utilized)	17 lin.ft
<u>Alternate Roofing</u> :-	
3" Ply Built-up Roofing	950 sq.ft
<u>One End Unit</u> - additional materials	
3" Ply Built-up Roofing	250 sq.ft

## MISCELLANEOUS MATERIALS

<u>Item</u>	<u>Quantity</u>
One End Unit (Corner utilized)	
Standard Wood Door & Frame, 2'-8 x 6'-8 x 1 1/2" (Type & Style optional)	1 Each
Window, double hung, wood sash, 24 1/2" x 24 double strength glass	1 Each
Welded Wire Fabric, galvanized, 4'-6" x 10'-6" (60 x 120 H. rolls)	350 Sq. Ft.
Hold-down straps, 24 gauge, 1" wide x 16" long	90 Each
One End Unit (corner utilized)	
Hold-down straps, 24 gauge, 1" wide x 16" long	25 Each
Siding Trim materials and flashing under siding of low sections of roof	
[Section #4, are optional and not included in this Bill of Materials. Notes for various items are not listed.	

SERIES "A"

POLE-TYPE UNIT HANGAR  
FOR  
SMALL AND MEDIUM SIZE AIRCRAFT

**SERIES "A" 37'-6" MAX. WING SPREAD**

**BILL OF MATERIALS - 42 FT. UNIT**

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NOTES :-

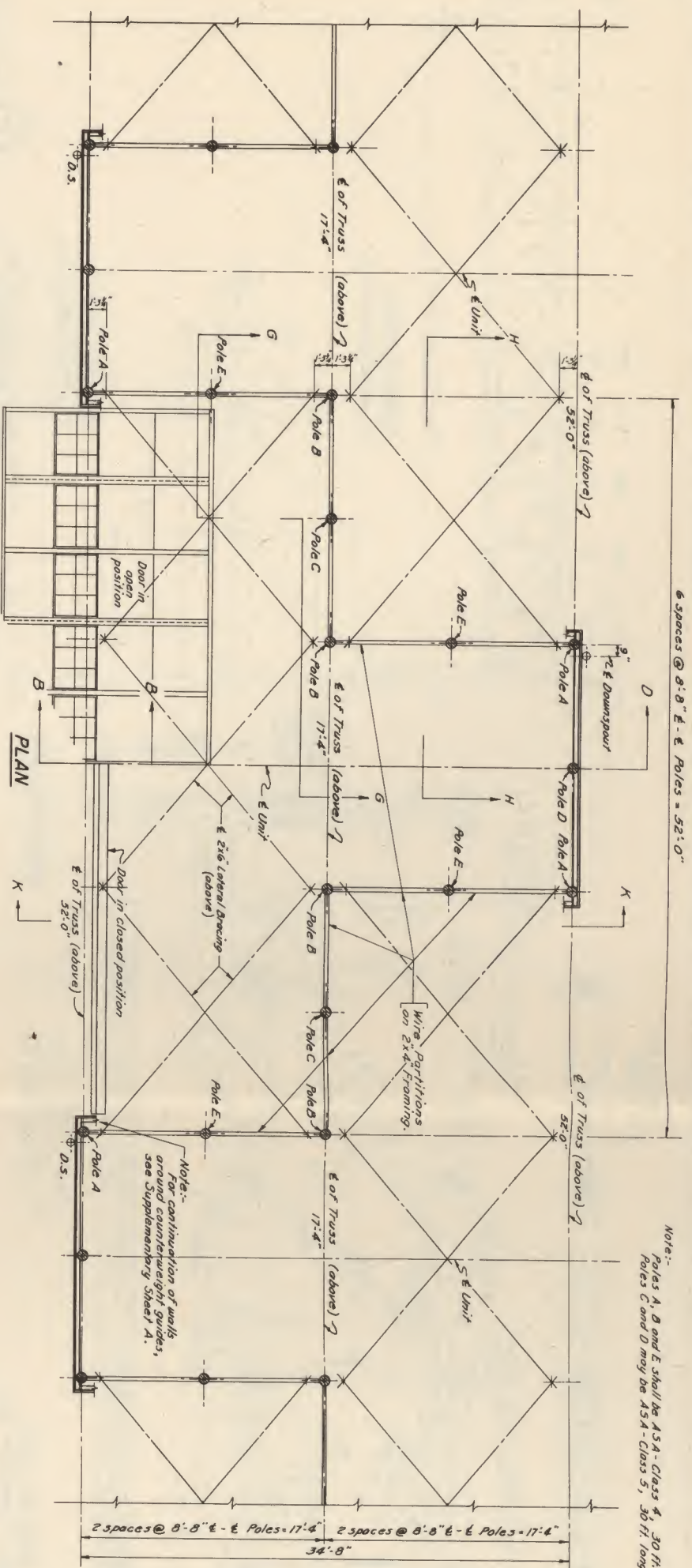
Materials shown are for one interior unit, as detailed on Sheets Nos. 2 and 3, except as noted. For end units, only additional materials are shown; to be added to those given for an interior unit. It is assumed that two end units will be used with any strip layout. For other type layouts, certain obvious modifications will be necessary in making off quantities from this Bill of Materials.

Other materials or smelly materials from which the substituted must be eliminated from the affected area.

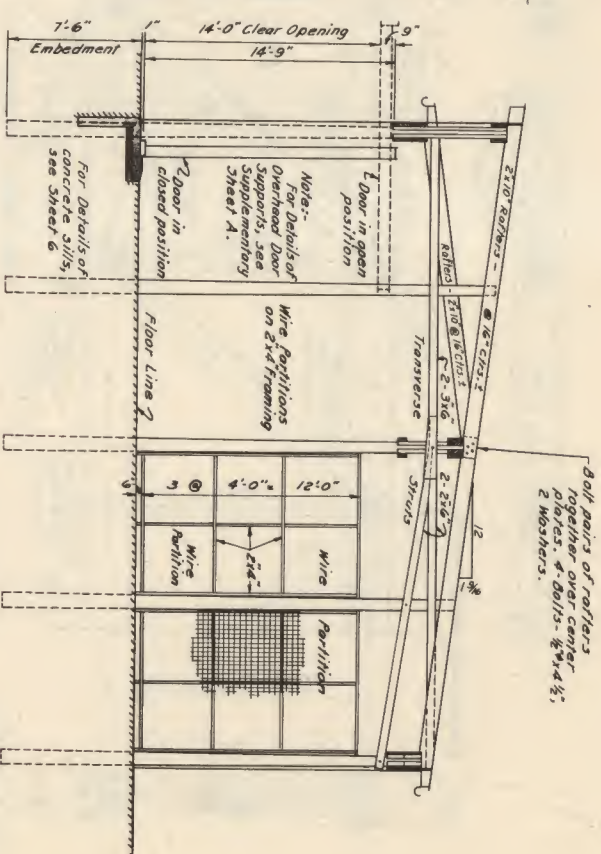
If corner is utilized for work area in end unit, materials other than those shown, are needed, if it is utilized for office or storage space, materials for interior walls and flooring must be provided.

No sub-floors has been provided in these danger units.

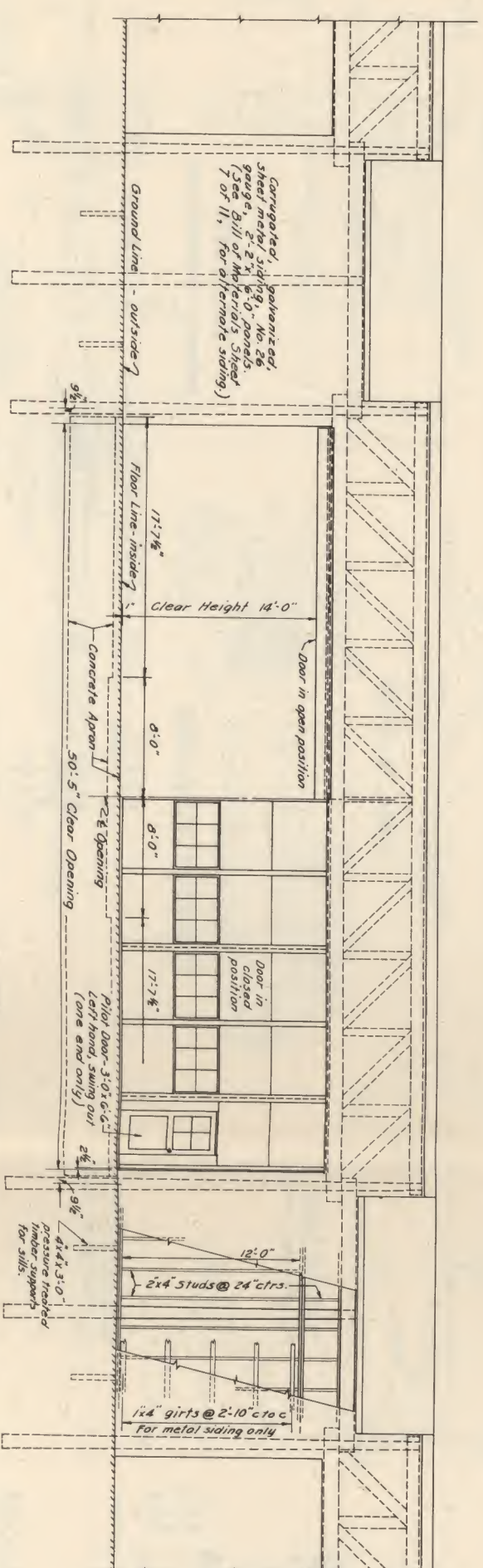




Note:-  
Poles A, B and E shall be ASA-Class 4, 30 ft. long  
Poles C and D may be ASA-Class 5, 30 ft. long

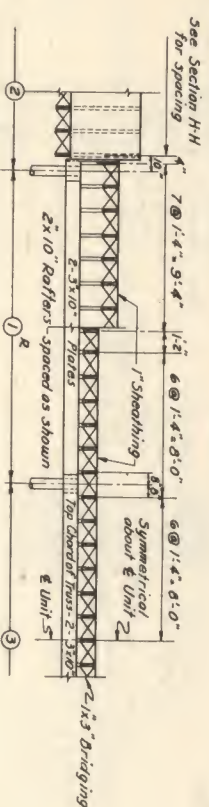


SECTION B-D

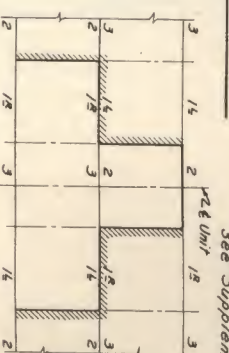


FRONT ELEVATION

*Note: Overhead Doors, 50'-0" wide x 15'-0" high, "Byrne" Canopy Type D, or equal, for Details of overhead supports, counterweights and operating equipment, see Supplementary Sheet A*

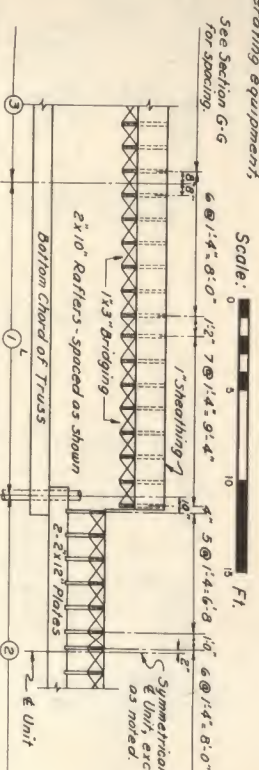


SECTION G-G

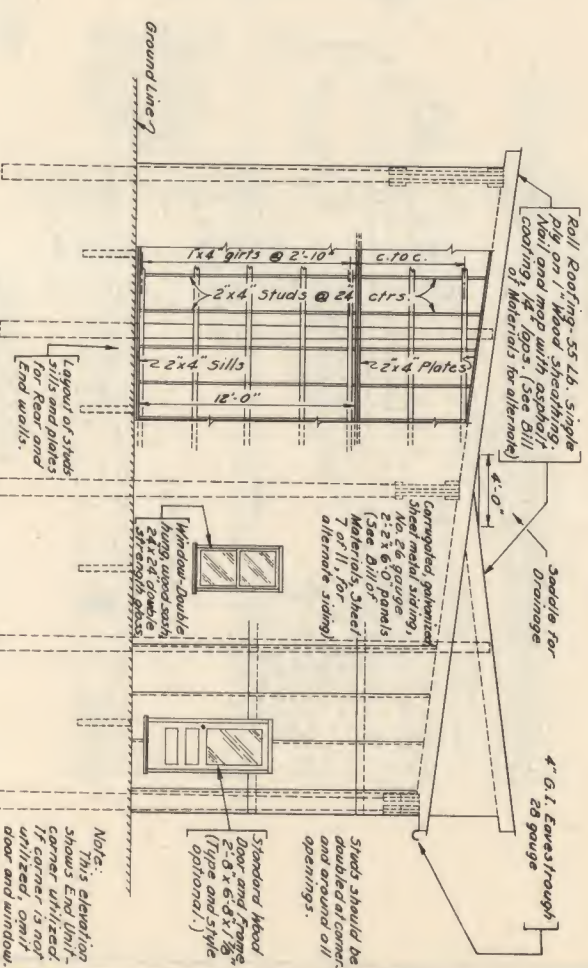


### RÄFTER FRAMING PLAN

(No Scale)



SECTION H-H



END ELEVATION

POLE-TYPE UNIT HANGAR  
FOR  
SMALL AND MEDIUM SIZE AIRCRAFT

**SERIES "B" 47'-6" MAX. WING SPREAD**

### HANGAR DETAILS I - 52 FT. UNIT

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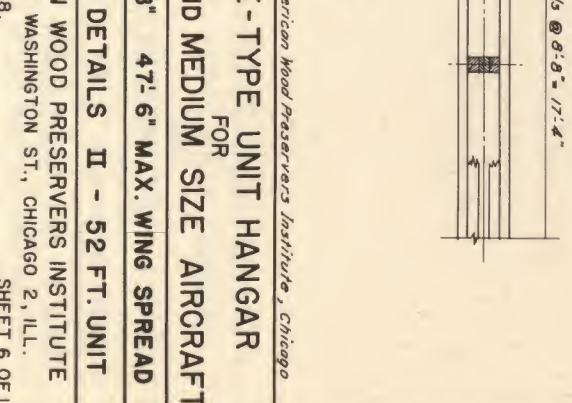
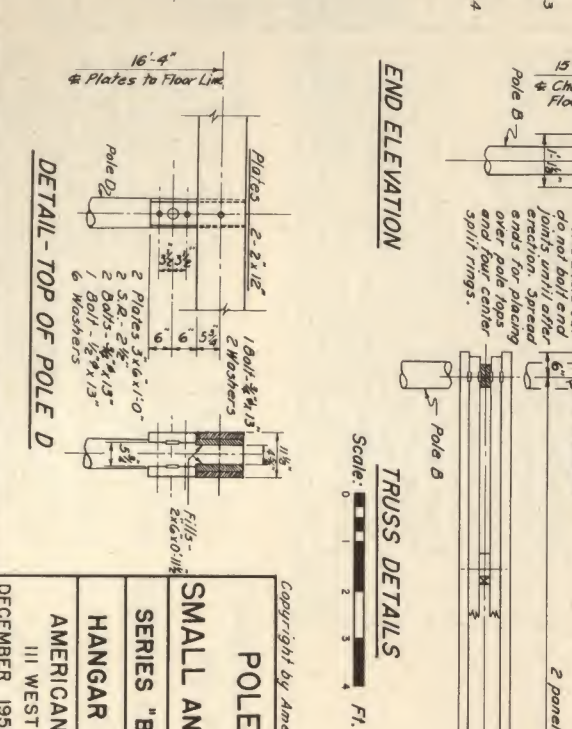
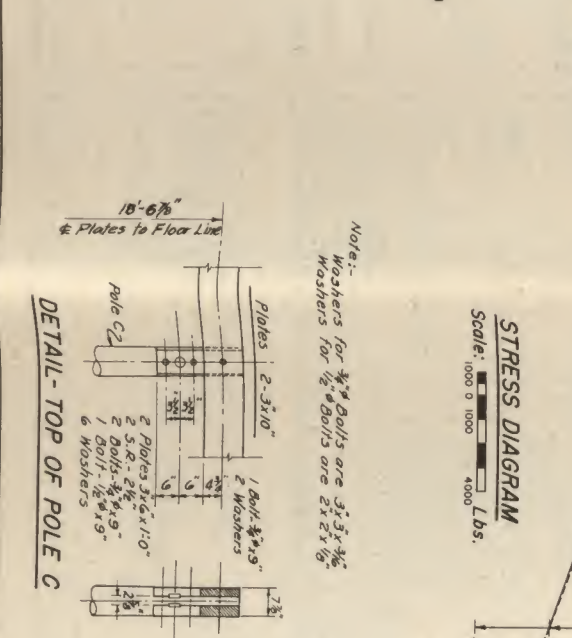
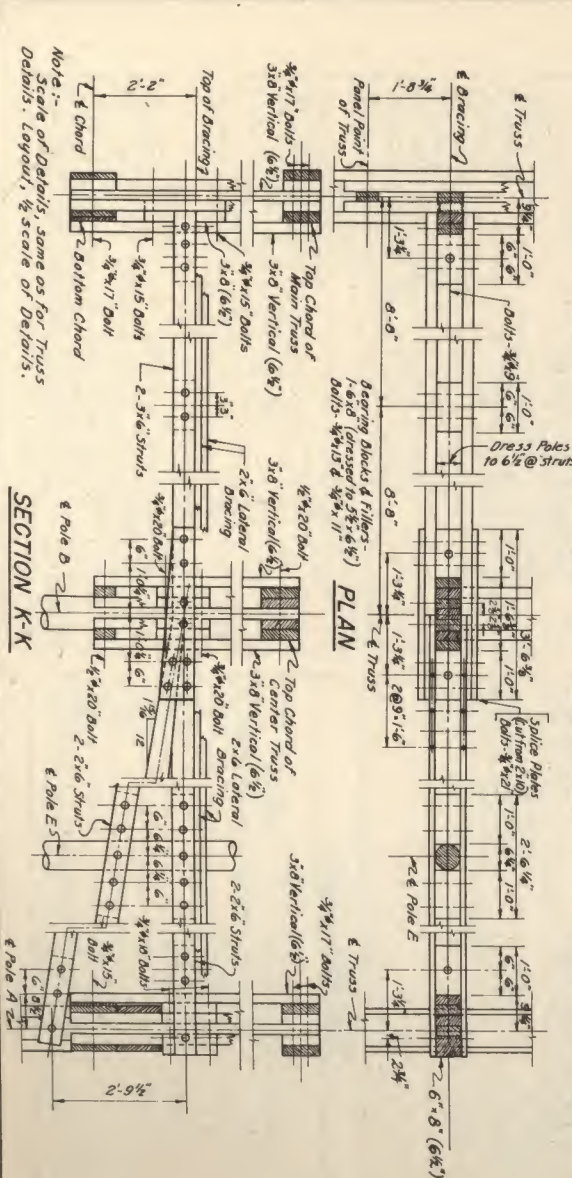
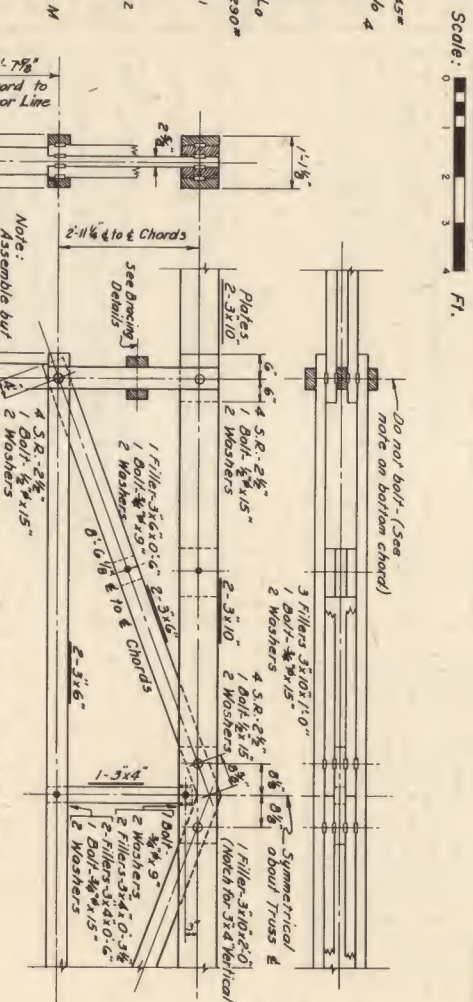
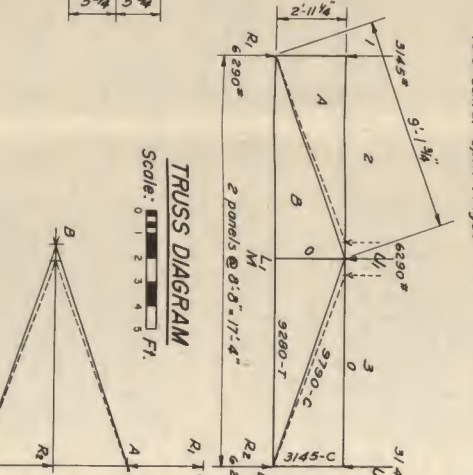
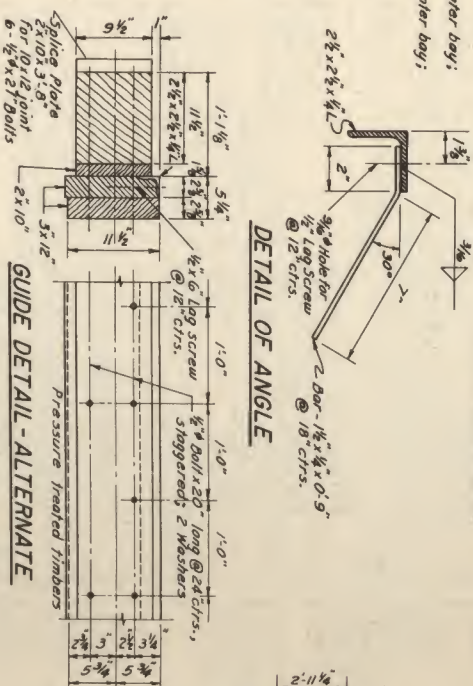
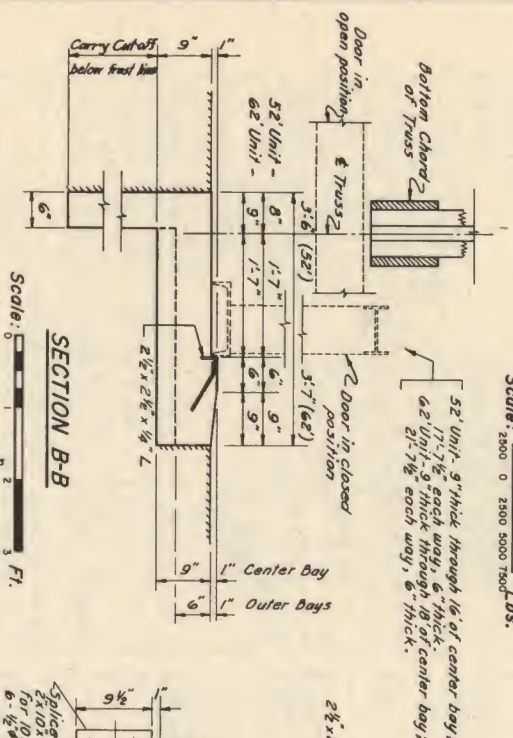
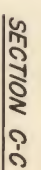
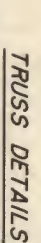
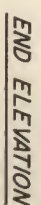
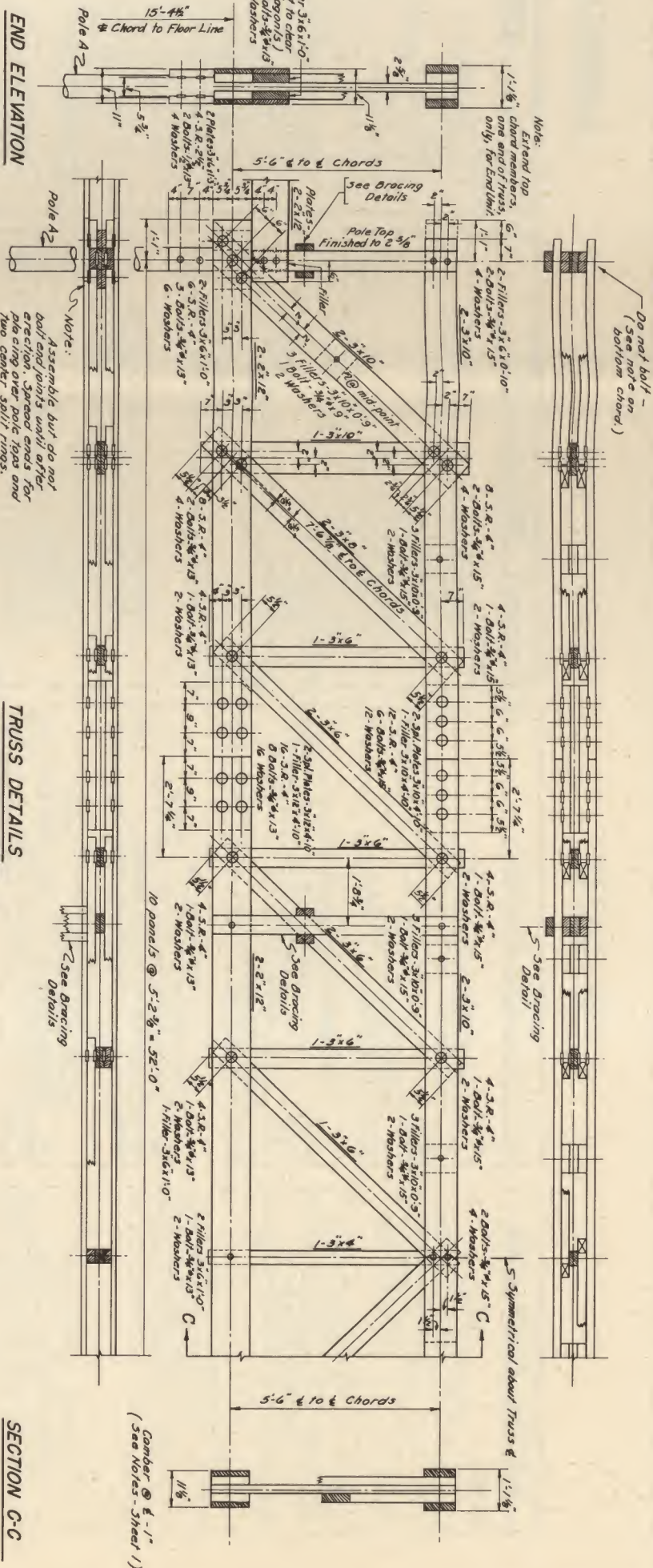
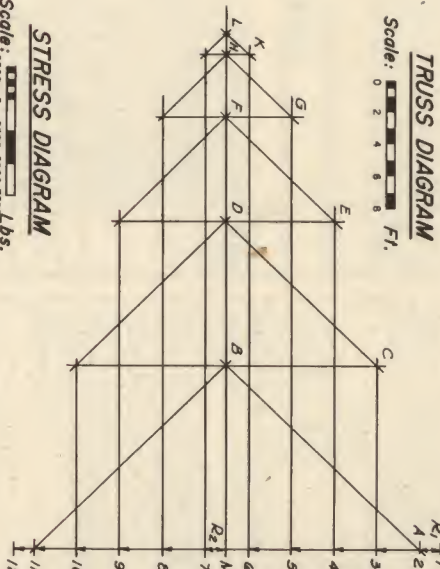
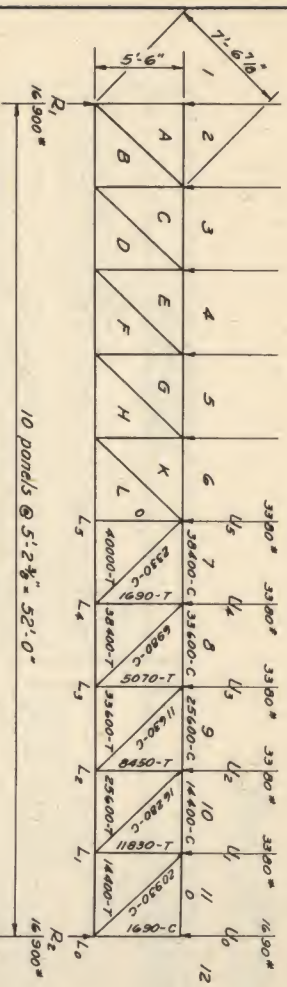
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8. SHEET 5 0

SHEET 5 OF 11

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## BILL OF MATERIALS

FOUNDATION			
Item	Quantity		
Concrete, Plain, 2500 p.s.i.	7 Cu Yds		
Door Lining - 1/2" - 2 1/2" x 3/4" x 50' 6" (includes 1/4" x 1/2" x 9" strips)	260 Lbs		
Alternate Sills:-			
Pressure treated timber - 4" dia, 2" dia, 3" dia, 3" dia, 6" long (slipper joints)	920 LBS		
Pressure treated timber - splice plates - 4" x 2'10" x 3/4" (front & back)	2375M		
Bolts - 1/2" - 3/4" x 20" Mch. Bolts, 5p. Hd. & Nut, & Cut Washers	125 Lbs.		
Bolts - 1/2" - 3/4" x 25" Mch. Bolts, 5p. Hd. & Nut, & Cut Washers (5 paces)	40 Lbs.		
FRAMEWORK			
Item	Quantity		
Wood Poles, A54 - Class 4, 30 Ft. long, Dia. @ Top - 6 3/8" Wn	8 Each		
Schedule - 52 Ft. Truss - Required			
Member	No.	Size	Length Cut from 12M
Top Chord - center section	2	3 x 10	2 @ 26' 130
Top Chord - end sections	4	3 x 10	13' 7" 4 @ 14' 140
Bottom Chord - center section	2	2 x 12	26' 0" 2 @ 26' 104
Bottom Chord - end sections	4	2 x 12	14' 1" 4 @ 16' 128
End Diagonals	4	3 x 10	9' 2 1/2" 2 @ 20' 100
Intermediate Diagonals	4	3 x 6	8' 9 1/2" 2 @ 18' 72
Verticals	2	3 x 10	6' 8" 1 @ 14' 35
Center Vertical	6	3 x 6	6' 8" 3 @ 14' 63
Top Chord Splice Plates	1	3 x 4	6' 6" 1 @ 8' 8
Top Chord Splice Filler Plates	4	3 x 10	4' 10" 2 @ 10' 80
Bottom Chord Splice Plates	2	3 x 12	4' 10" 2 @ 16' 96
Bottom Chord Splice Filler Plates	2	3 x 12	4' 10" 1 @ 18' 45
Top Chord Filler Plates	4	3 x 6	0' 10" 1 @ 18' 27
Bottom Chord Filler Plates	3	3 x 6	1' 0" 1 @ 18' 27
Pole Top Plates (cleats)	4	3 x 6	1' 3" 1 @ 20' 120M
Hardware			
4" Dia. Split Rings	No.	Weight	
2 1/2" Dia. Split Rings	148	112 Lbs.	
3/4" x 9" Mch. Bolts, Hex Hd. & Nut	8	3 "	
3/4" x 13" Mch. Bolts, Hex Hd. & Nut	2	3 "	
3/4" x 15" Mch. Bolts, Hex Hd. & Nut	31	67 "	
1/2" x 13" Mch. Bolts, Hex Hd. & Nut	30	70 "	
Washers, 3/32" x 3/4" (132); 2" x 2 1/2" (8)	140	67 "	335 Lbs.
Schedule 17'-4" Truss - Required			
Member	No.	Size	Length Cut from 12M
Top Chord	2	3 x 10	19' 4" 2 @ 20' 100
Bottom Chord	2	3 x 6	18' 4" 2 @ 20' 60
Diagonals	4	3 x 6	9' 7 1/2" 2 @ 20' 60
Vertical	1	3 x 4	2' 11 1/2" 1 @ 6' 6
Top Chord Filler Plate	1	3 x 10	2' 0" 1 @ 8' 20
Top Chord Filler Plates	6	3 x 10	1' 0" -
Top Chord Filler Plates	2	3 x 4	0' 3 1/2" -
Bottom Chord Filler Plates	2	3 x 4	0' 6" -
Diagonal Filler Plates	2	3 x 6	0' 6" -
Hardware			
2 1/2" Dia. Split Rings	No.	Weight	
3/4" x 9" Mch. Bolts, Hex Hd. & Nut	24	7 Lbs.	
3/4" x 15" Mch. Bolts, Hex Hd. & Nut	3	7 "	
1/2" x 13" Mch. Bolts, Hex Hd. & Nut	2	2 "	
Washers, 3/32" x 3/4" (12); 2" x 2 1/2" (4)	16	7 "	30 Lbs.
Plates			
Member	No.	Size	Length Cut from 12M
Center Plates	2	3 x 10	18' 4" 1 @ 8' 100
Pole Top Plates (Cleats)	2	3 x 6	1' 0" 1 @ 8' 12
Rear Plates	2	2 x 12	18' 4" 2 @ 20' 80
Pole Top Plates (Cleats)	2	3 x 6	1' 0" -
Rear Plate Fillers (on Truss)	4	3 x 6	1' 0" -
			120 LBS

FRAMEWORK				(continued)
Item	(Continued)			Quantity
Plates				
Hardware	No.	Weight		
2 1/2" Dia. Split Rings	4	1 lbs.		
1/2"x1/3" Mech. Bolts, Hex Hd. & Nut (1-1/2"x1/2")	2	"		
3/8"x1/2" Mech. Bolts, Hex Hd. & Nut	3	"		
3/8"x1/3" Mech. Bolts, Hex Hd. & Nut	7	14 "		
Washers, 3/4"x3/8" (20); 2"x2"x1/8" (4)	24	11 "	35 lbs.	
Horizontal Bracing				
Member	No.	Length	Cut From	15M
Transverse Struts	4	3x6	4 @ 16'	108
Transverse Struts	4	2 x 6	17'-10 1/2"	4 @ 18' 72
Transverse Struts	4	2 x 6	18'-0"	4 @ 18' 72
Transverse Struts Splice Plates	4	2 x 10	1 @ 16'	27
Beaming Blocks & Fillers	14	6 x 8	1'-0"	1 @ 14' 56
Verticals	10	3 x 8	6'-6"	5 @ 14' 140
Vertical Beaming Blocks (Dress to 6 1/2)	2	6 x 8	1'-2"	1 @ 4' 16
Vertical Beaming Blocks (Dress to 6 1/2)	2	3 x 6	1'-2"	1 @ 12' 24
Vertical Beaming Blocks (Dress to 6 1/2)	2	3 x 6	2'-0"	
Vertical Beaming Blocks	6	3 x 6	1'-2"	1 @ 8' 12
Vertical Fillers (Cut to Fit Truss Diagonal)	2	3 x 8	3'-0"	1 @ 6' 12
Vertical Fillers (Dress to 1")	4	2 x 8	1'-0"	1 @ 4' 5
Diagonal Braces	6	2 x 6	23'-6"	6 @ 24' 144
Hardware				
1/2"x10, 1/2"x12 (4 each) Mech. Bolts, Hex Hd. & Nut	No.	Weight		
1/2"x20 Mech. Bolts, Hex Hd. & Nut	12	8 lbs.		
(Continued in last column, under Miscellaneous Materials)	4	5 "		
One End Unit (corner utilized); additional materials				
Wood Poles, A-54 - Class 4, 30 ft. long, Dia @ Tip - 6 1/2" Min.				3 each
Plates				
Member	No.	Size	Length	Cut From
Center Plate	1	3 x 10	18'-4"	1 @ 20' 80
Rear Plates	2	2 x 12	18'-4"	2 @ 20' 80
Plate Top Plates (cleats)	8	3 x 6	1'-0"	1 @ 8' 12
Hardware				
1/2"x1/3" Mech. Bolts, Hex Hd. & Nut	No.	Weight		
3/8"x1/3" Mech. Bolts, Hex Hd. & Nut	2	2 lbs.		
Washers, 3/4"x3/8" (20); 2"x2"x1/8" (4)	24	11 "		35 lbs.
One End Unit (corner not utilized); additional materials				
Plates				
Member	No.	Size	Length	Cut From
Center Plate (Deduct 1/piece)	-	3 x 10	18'-4"	Deduct - 80
Rear Plates	2	2 x 12	18'-4"	2 @ 20' 80
Plate Top Plates (cleats)	4	3 x 6	1'-0"	1 @ 4' 6
Hardware				
2 1/2" Dia. Split Rings (Deduct)	No.	Weight		
3/8"x1/3" Mech. Bolts, Hex Hd. & Nut	4	8 "		
Washers, 3/4"x3/8"	8	4 "		10 lbs.
WALLS AND ROOF				
Item				
Member	No.	Size	Length	Cut From
Still support-pressure treated lumber	2	2 x 4	3'-0"	1 @ 6' 6
Stills	2	2 x 4	19'-0"	2 @ 20' 27
Stills	4	2 x 4	2'-0"	1 @ 8' 5
Plates	3	2 x 4	19'-0"	3 @ 20' 40
Plates	6	2 x 4	1'-0"	1 @ 12' 8
Studs	15	2 x 4	12'-0"	15 @ 12' 120
Studs	15	2 x 4	3'-4"	5 @ 10' 33
Studs	6	2 x 4	5'-6"	3 @ 12' 24
Traming for Wire Partitions	12	2 x 4	12'-6"	12 @ 14' 112

SERIES "B"

[illegible]

Item		Quantity
Alternate Siding :- (continued)		
One End Unit (corner utilized) - additional materials		
Corrugated aluminum siding, 20 gauge		70 sheets
4" Aluminum Forestrough, 20 gauge		20 lin. ft.
Member	No. Size Length Cul From 75M	20 lin. ft.
Girls - (3'-0" x 2'-0" instead of 2'-0")	- 1 x 4 380 lin. ft. @ 1/2" 1/2"	120 lin. ft.
One End Unit (corner not utilized) - additional materials		
Corrugated aluminum siding, 20 gauge		75 sheets
4" Aluminum Forestrough, 20 gauge		20 lin. ft.
3" Old Aluminum Downspout (with L @ lower end)		20 lin. ft.
Member	No. Size Length Cul From 75M	
Girls - (3'-0" x 2'-0" instead of 2'-0")	- 1 x 4 400 lin. ft. @ 1/2" 1/2"	130 lin. ft.
Alternate Siding :-		
Member	No. Size Length Cul From 75M	
Drop Siding - 1660 lin. ft.	- x 6" Random Lengths 430	net
(Deck)	- 1 x 4 380 lin. ft. Deck - 104	750 lin. ft.
Building Paper (under Drop Siding)		900 sq. ft.
One End Unit - additional materials		
Member	No. Size Length Cul From 75M	
Drop Siding - 2200 lin. ft.	- x 6" Random Lengths 100	net
Girls (Deck)	- 1 x 4 410 lin. ft. Deck - 137	960 lin. ft.
Building Paper (under Drop Siding)		1100 sq. ft.
Alternate Roofing :-		
3-Ply Built-up Roofing		450 sq. ft.
One End Unit - additional materials		
3-Ply Built-up Roofing		350 sq. ft.
MISCELLANEOUS MATERIALS		
Item	Quantity	
Steel frame, steel metal clad overhead type door, 50" wide x 150" high	1 each	
(Type canopy type door is shown, details of overhead supports, counterweights and operating equipment are similar to those shown on Supplementary Sheet A for Series C Hangers. Arrangement of pilot door and windows, optional with Owner. The Manufacturer should furnish detail plans of the adopted door, together with plans and a bill of materials of the auxiliary supports and equipment, not furnished with door.)		
Alternate Door :-		
Any alternate type of steel frame, steel metal clad overhead door which is acceptable to the Owner and which provides the required clear opening, 50" wide x 15'-0" high, may be used. The Manufacturer should furnish detail plans of the adopted door, together with plans and a bill of materials of the auxiliary supports and equipment, not furnished with door.	1 each	

NOTES:-

Materials shown are for one interior unit, as detailed on Sheets Nos. 5 and 6, except as noted. For end units, only additional materials are shown, to be added to those given for an interior unit. It is assumed that two end units will be used with any strip layout. For other type layouts, certain obvious quantities will be different. Materials

Where Alternates are shown, materials for which they are substituted must be eliminated from the take off.

If corner is utilized for work area in end unit, no materials other than those shown are needed. If it is utilized for office or storage space, materials

MISCELLANEOUS MATERIALS		
Item	Quantity	
One End Unit - (Corner utilized)		
Standard Wood Door & Frame, 2'3 1/2 x 6'8 x 3 1/2" (Type & Style optional)	1 Each	
Window, double hung, wood sash, 24 x 24"		
double strength glass	1 Each	
Welded Wire Fabric, galvanized, 44-M4 (60 x 150 Ft. rolls)	650 Sq.Ft.	
Weld down Straps, 22 gauge, 1/4" wide x 20" long	110 Each	
One End Unit - (Corner utilized)		
Weld down Straps, 22 gauge, 1/4" wide x 20" long	30 Each	
Siding Trim materials and flashing under siding of low sections of roof (Section M, M1), are optional and not included in this Bill of Materials. For various items are not listed.		
Horizontal Bracing (Continued)	No.	Weight
3/4"x4 1/2" Mech. Bolt, Hex Nut & Nut	3	3 lbs.
3/4"x9" Mech. Bolt, Hex Nut & Nut	8	12 "
3/4"x11" Mech. Bolt, Hex Nut & Nut	32	57 "
3/4"x13" Mech. Bolt, Hex Nut & Nut	10	20 "
3/4"x15" Mech. Bolt, Hex Nut & Nut	14	32 "
3/4"x17" Mech. Bolt, Hex Nut & Nut	26	66 "
3/4"x18" Mech. Bolt, Hex Nut & Nut	4	11 "
3/4"x20" Mech. Bolt, Hex Nut & Nut	4	12 "
Washers, 3"x3 1/2" (208); 2"x2 3/8" (32)	240	109 "
	340	lbs.

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# POLE-TYPE UNIT HANGAR FOR

## SMALL AND MEDIUM SIZE AIRCRAFT

**SERIES "B" 47'-6" MAX. WING SPREAD**

**BILL OF MATERIALS - 52 FT. UNIT**

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11 WEST WASHINGTON ST. CHICAGO 3, ILL.

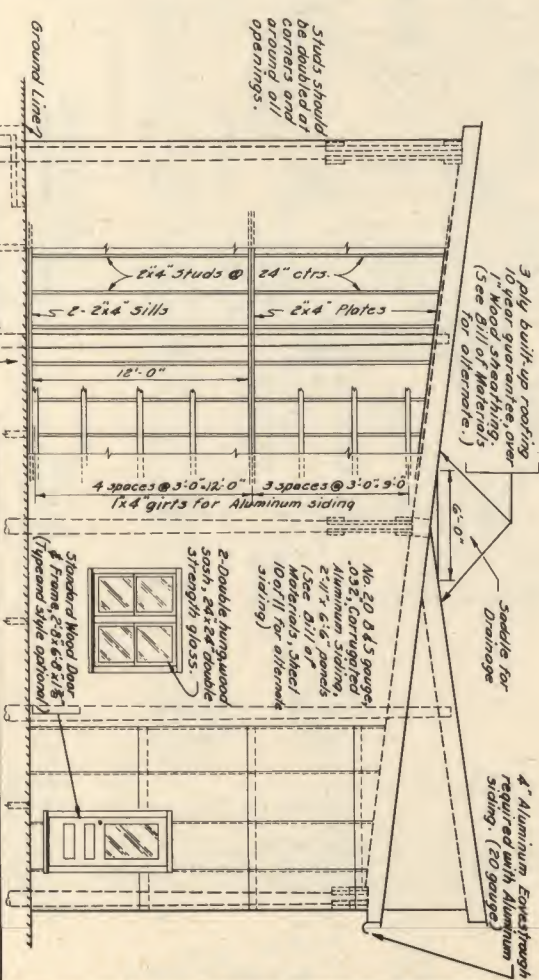
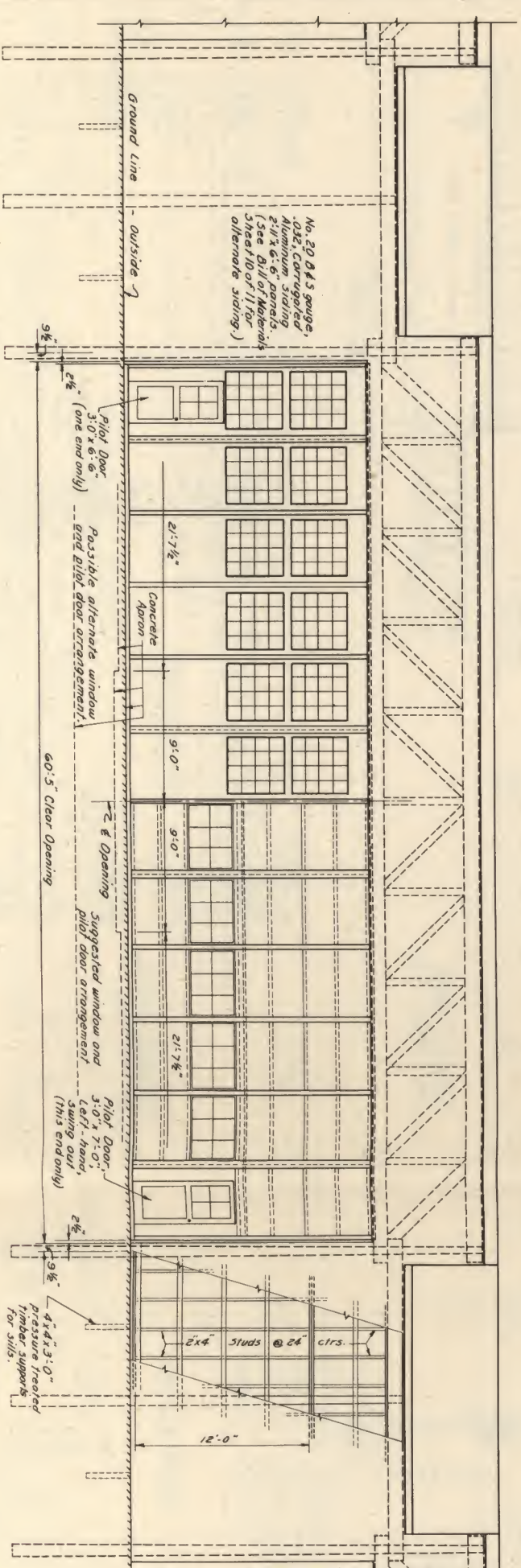
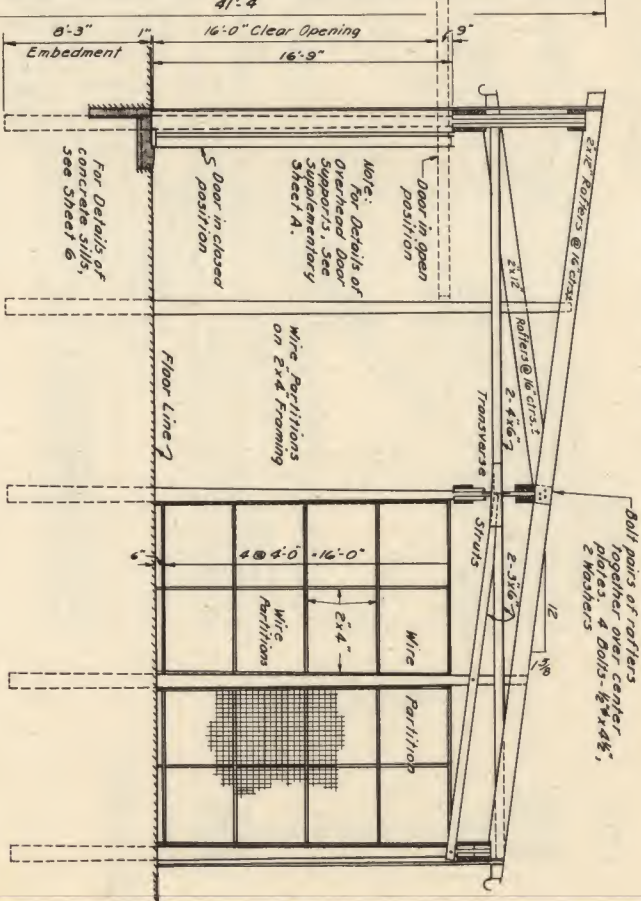
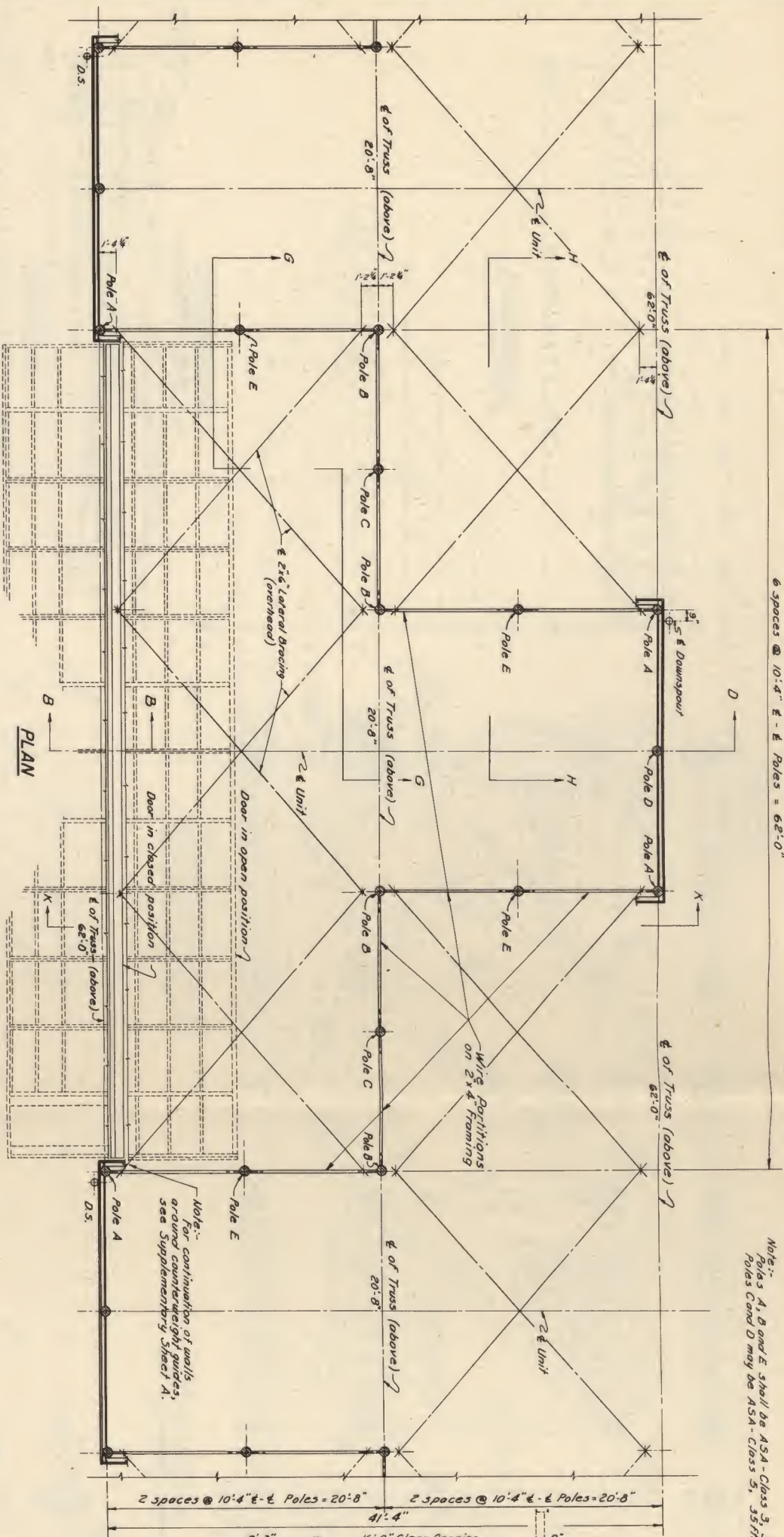
DECEMBER 1958

SHEET 7 OF 11



6 spaces @ 10'-4" E - E Poles = 62'-0"

Note: Poles A, B and E shall be ASA - Class 3, 35 ft. long. Poles C and D may be ASA - Class 5, 35 ft. long.



Note: Overhead Door, 60'-0" wide x 17'-0" high. "Burns" Canopy Type B, or equal, for details of overhead supports, counterweights and operating equipment, see Supplementary Sheet A.

Scale: 0 5 10 Ft.

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POLE-TYPE UNIT HANGAR  
FOR  
SMALL AND MEDIUM SIZE AIRCRAFT

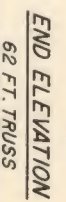
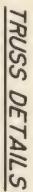
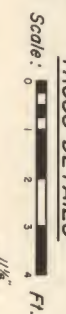
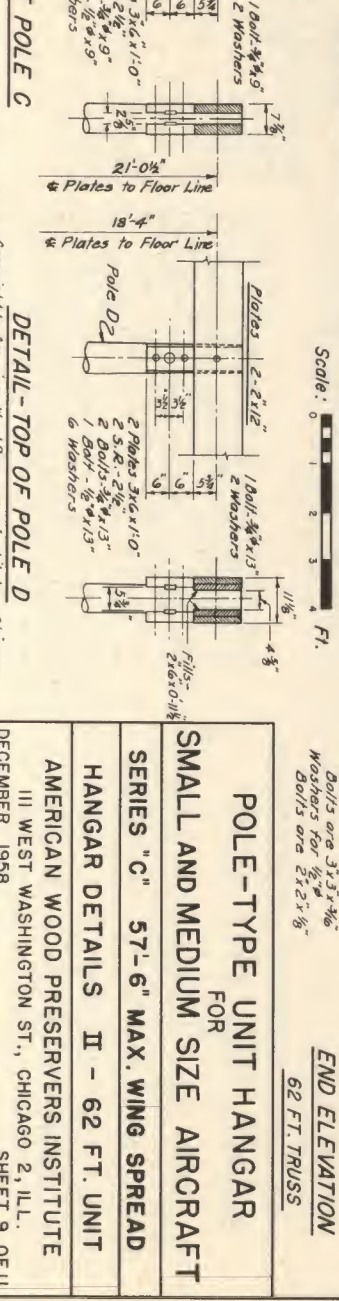
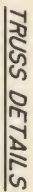
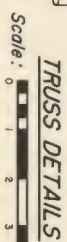
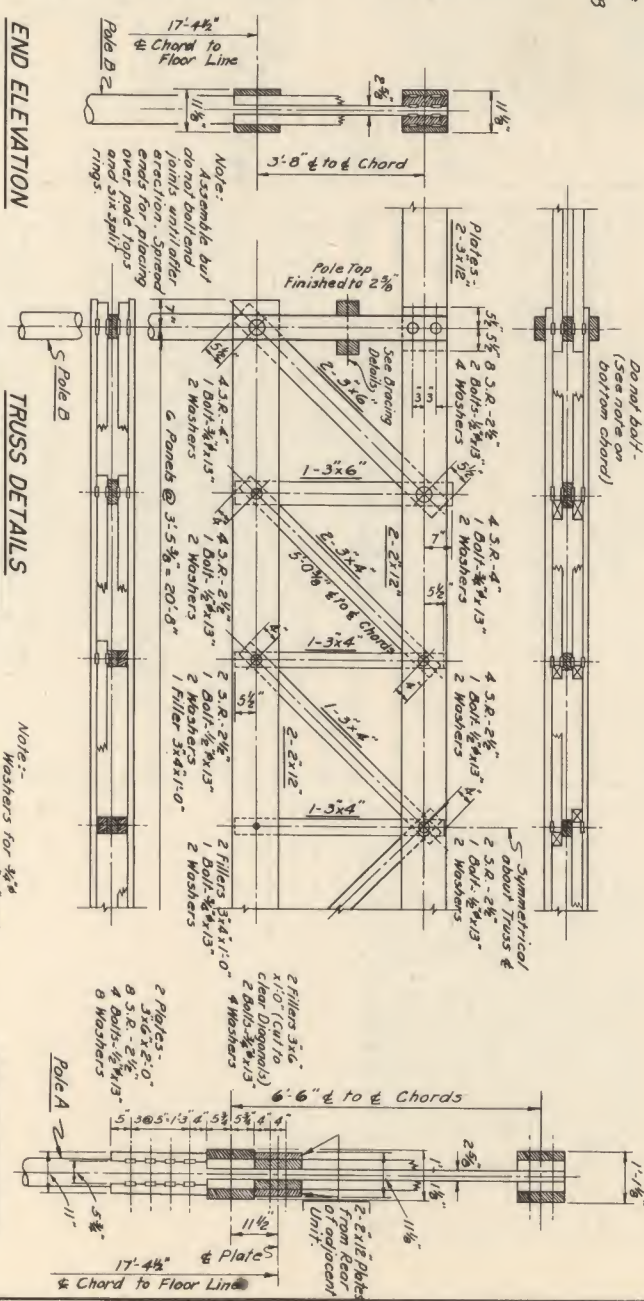
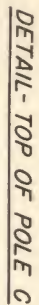
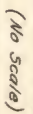
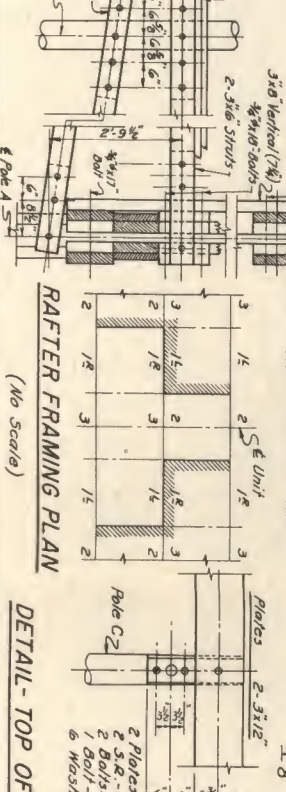
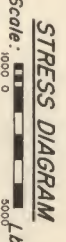
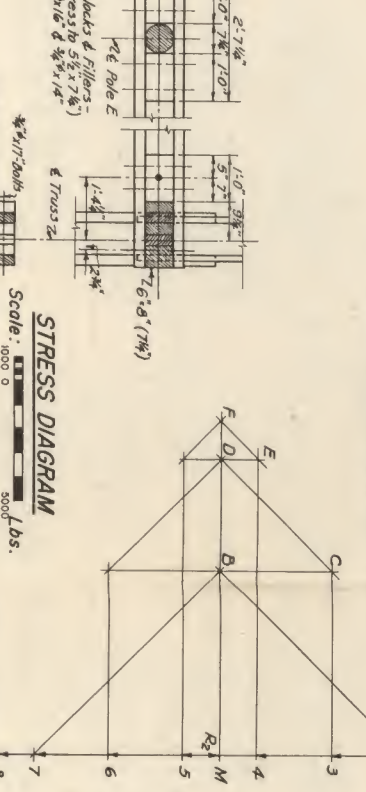
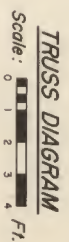
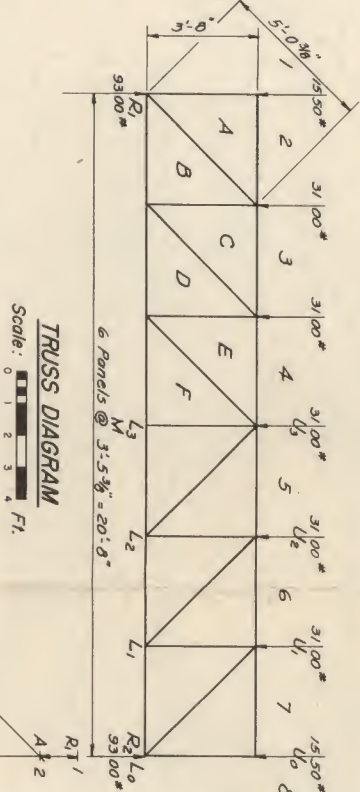
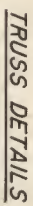
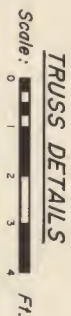
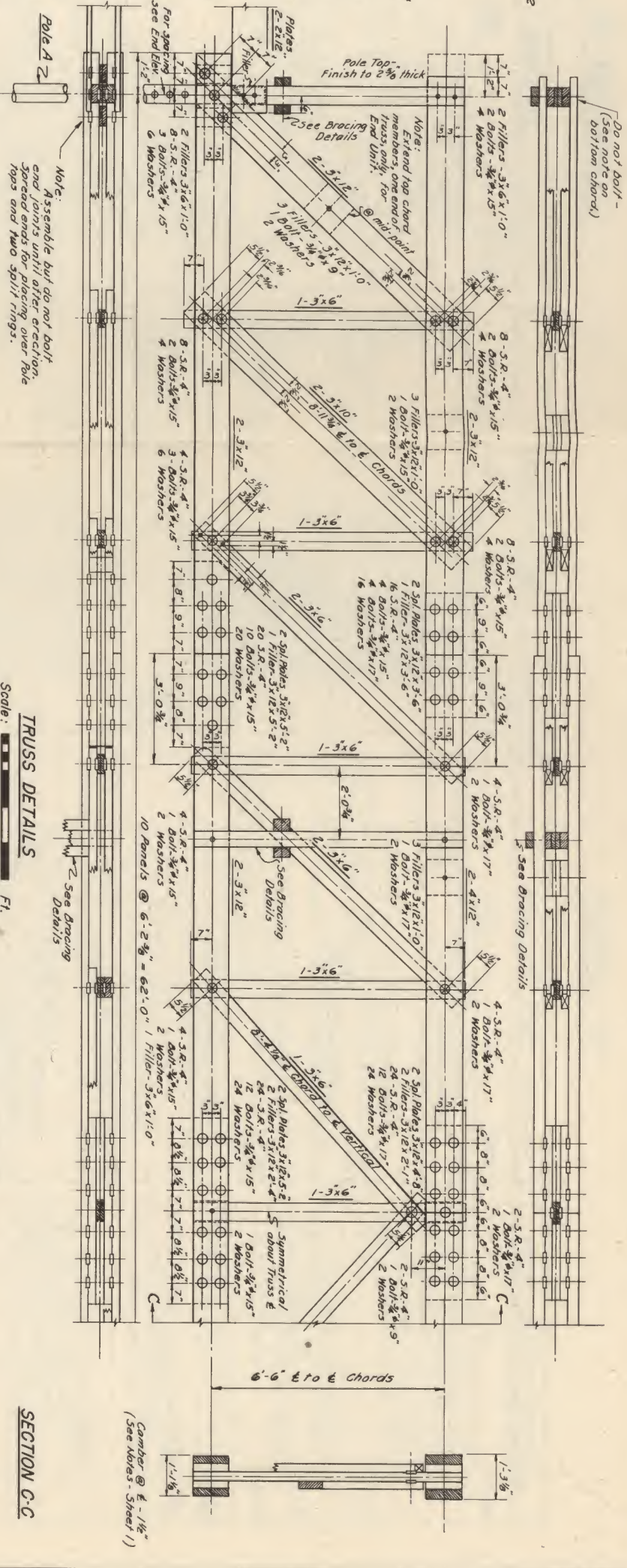
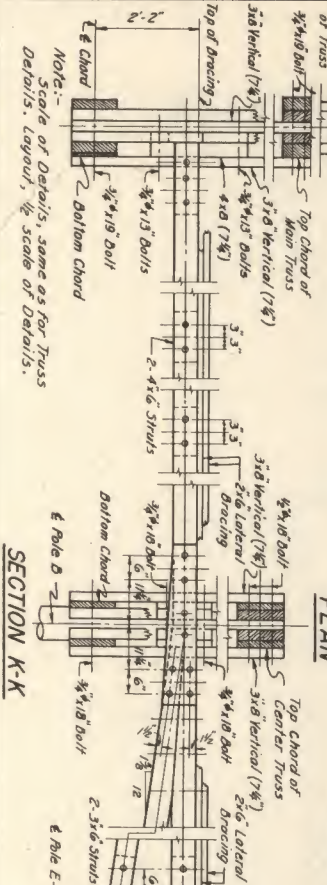
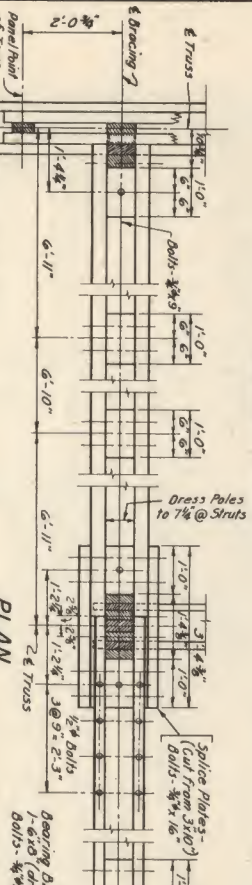
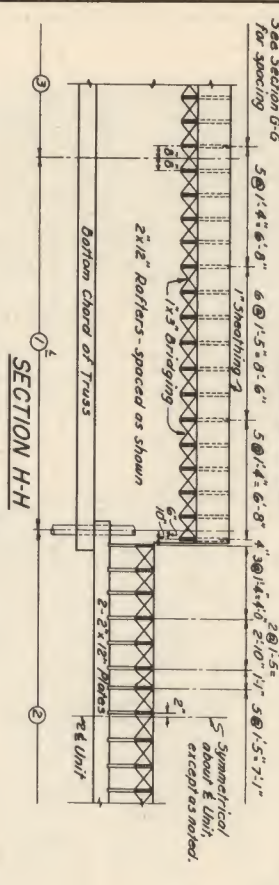
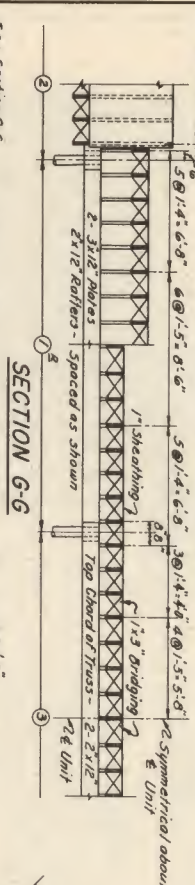
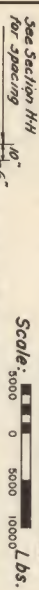
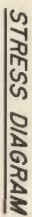
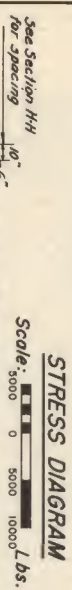
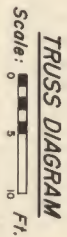
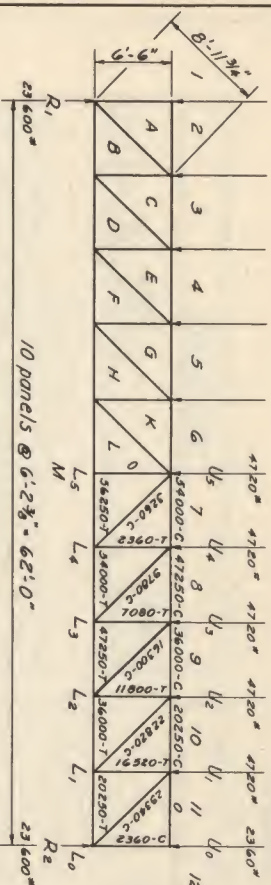
SERIES "C" 57'-6" MAX. WING SPREAD

HANGAR DETAILS I - 62 FT. UNIT

AMERICAN WOOD PRESERVERS INSTITUTE

III WEST WASHINGTON ST., CHICAGO 2, ILL.  
SHEET 8 OF 11  
DECEMBER 1958.





Note:- Washers for  $\frac{3}{8}" \phi$   
Bolts are  $3 \times 3 \times \frac{3}{16}"$   
Washers for  $\frac{1}{2}" \phi$   
Bolts are  $2 \times 2 \times \frac{1}{8}"$

POLE-TYPE UNIT HANGAR  
FOR  
SMALL AND MEDIUM SIZE AIRCRAFT

**SERIES "C" 57'-6" MAX. WING SPREAD**

HANGAR DETAILS II - 62 FT. UNIT

AMERICAN WOOD PRESERVERS INSTITUTE

III WEST WASHINGTON ST., CHICAGO 2, ILL.  
DECEMBER 1958. SHEET 9 0

2, ILL.  
SHEET 9 OF 11

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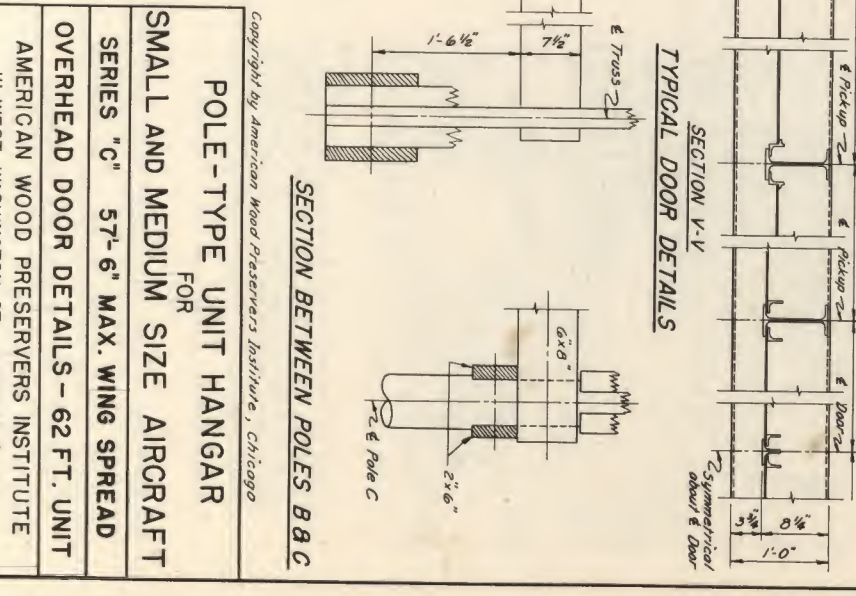
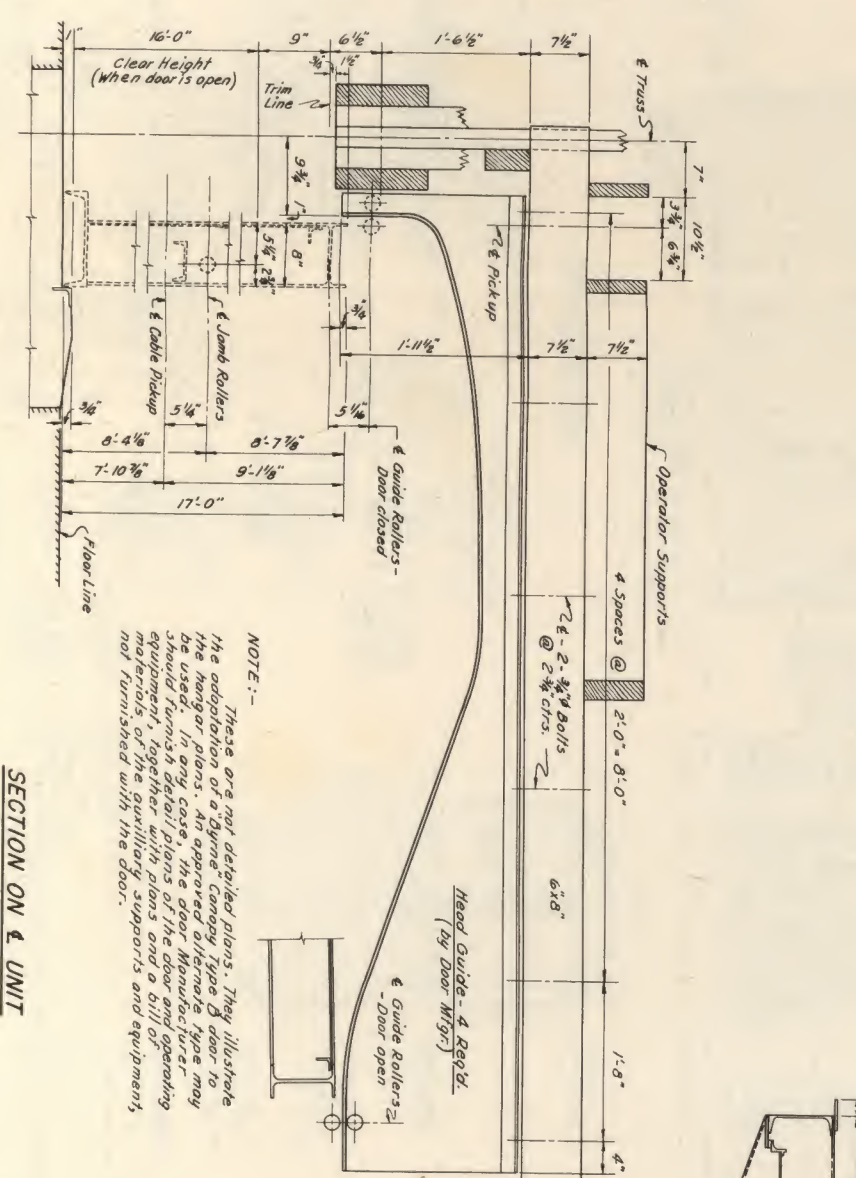
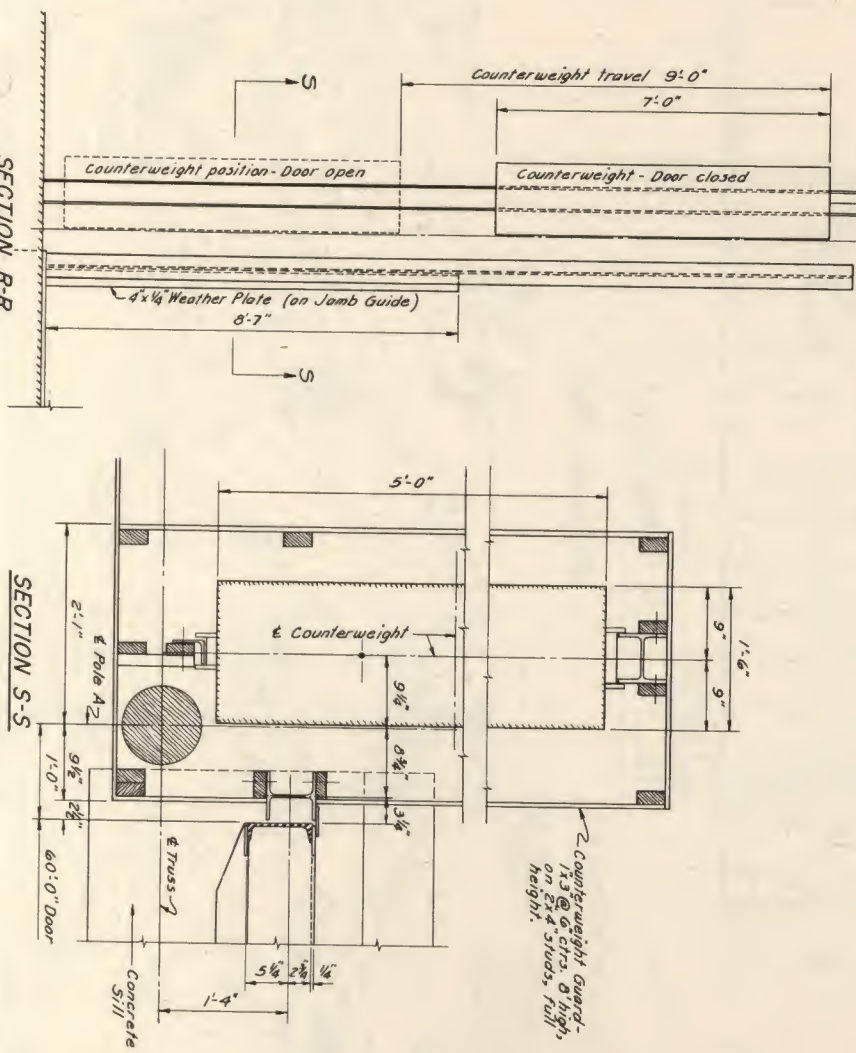
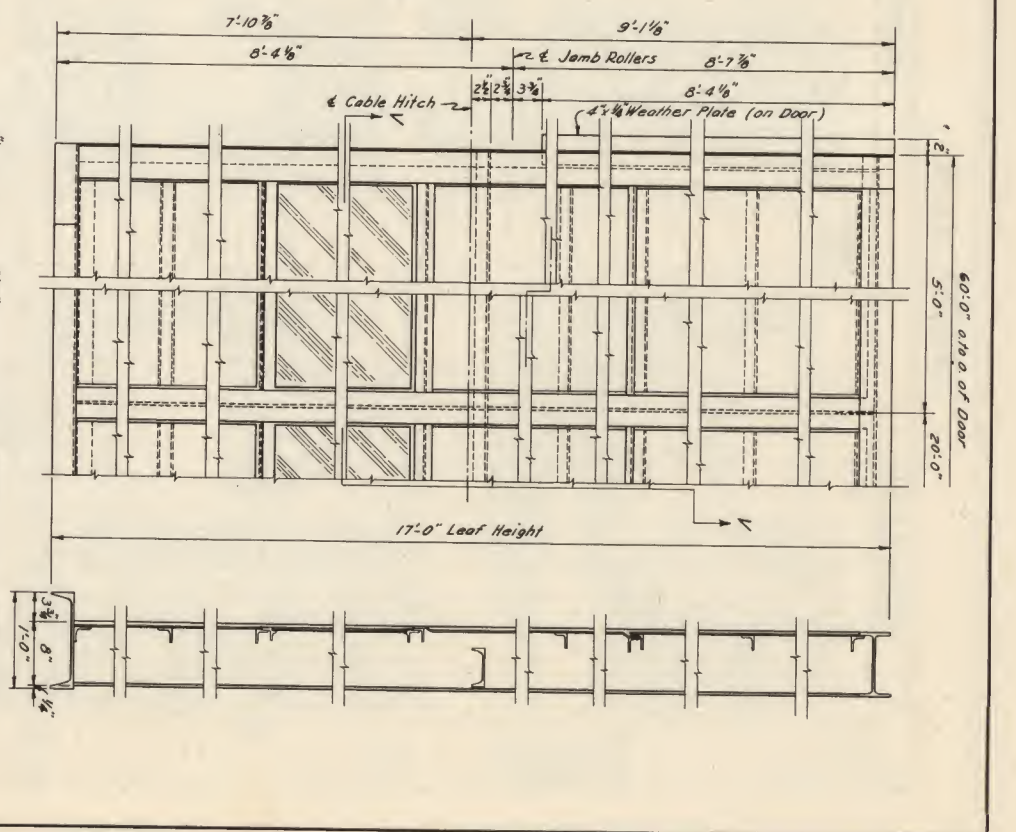
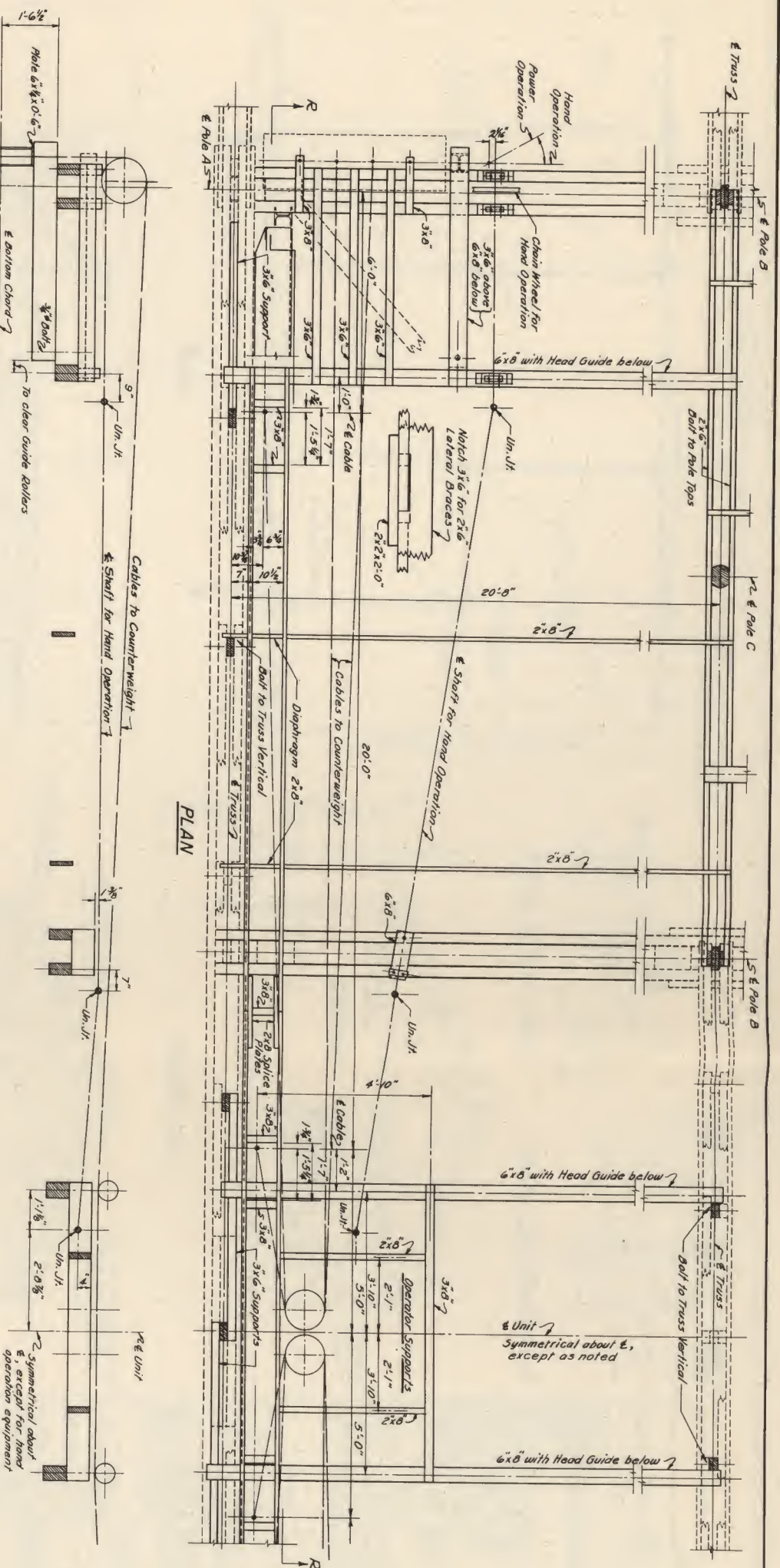
BILL OF MATERIALS

FOUNDATION		
Item	Quantity	
Concrete, Plain, 2500 p.s.i.	8 Cub Yd	
Door Nosing - 1L-2½x2½x½x60-6 (includes ½x6x3x½)	310 Lbs.	
Alternate Sills:-		
Pressure treated timber-1-½in, 1-2½in, 2-3x12, 60-6 long (sinker joints)	100 FBM	
Pressure treated lumber-splice plates-6-2x12x3-6 (front & back)	35 FBM	
Boisls-40-¾x20" Mch. Boisls, 3½ Mch & Nut, 2 cut Washers	145 Lbs.	
Boisls-18-¾x23" Mch. Boisls, 3½ Mch. & Nut, 2 Cut Washers	60 Lbs.	
FRAMEWORK		
Item	Quantity	
Wood Poles, ASDA - Class 3, 35 Ft. long, Dia @ Top-7½ Mch.	8 Each	
Schedule-62 Ft. Truss - Required		
Member	No.	Size Length Cul from FBM
Top Chord - center sections	4	4x12 15'-5½ 4 @ 16' 5½
Top Chord - end sections	4	3x12 16'-1½ 4 @ 18' 2½
Bottom Chord - center sections	4	3x12 15x5½ 4 @ 16' 192
Bottom Chord - end sections	4	3x12 16'-8½ 4 @ 18' 216
End Diagonals	4	3x12 10'-8" 4 @ 14' 168
Intermediate Diagonals	4	3x10 10'-3½ 4 @ 12' 120
Intermediate Diagonals	2	3x6 9'-10½ 4 @ 20' 120
Verticals	2	3x6 9'-3½ 2 @ 18' 54
Verticals	2	3x6 7'-11" 1 @ 16' 24
Verticals	4	3x6 7'-8" 2 @ 16' 48
Verticals	1	3x6 7'-6½ 1 @ 8' 12
Top Chord Splice Plates, Panel 3	4	3x12 3'-6" 1 @ 14' 42
Top Chord Splice Filler Plates	2	3x12 3'-6" 2 @ 16' 96
Top Chord Splice Filler Plates	2	3x12 2'-1" 2 @ 16' 96
Bottom Chord Splice Plates, Panel 3	4	3x12 5'-2" 2 @ 16' 96
Bottom Chord Splice Filler Plates	2	3x12 5'-2" 2 @ 16' 96
Bottom Chord Splice Filler Plates	2	3x12 2'-4" -
Top Chord Filler Plates	18	3x12 1'-0" -
Top Chord Filler Plates, @ Poles	4	3x6 1'-0" 2 @ 10' 30
Bottom Chord Filler Plates	6	3x6 1'-0" 2 @ 10' 30
Pole Top Plates (Cleats)	4	3x6 2'-0" 1690 FBM
Hardware		
4" Dia. Split Rings	228	173 Lbs.
2½" Dia. Split Rings	16	5 "
¾"x13" Mch. Boisls, Hex Hd. & Nut	8	7 "
¾"x9" Mch. Boisls, Hex Hd. & Nut	3	5 "
¾"x13" Mch. Boisls, Hex Hd. & Nut	69	157 "
¾"x17" Mch. Boisls, Hex Hd. & Nut	27	68 "
Washers, 3"x3"x½" (214); 2"x2"x½" (6)	230	110 "
Schedule-20:8 Truss - Required		
Member	No.	Size Length Cul from FBM
Top Chord	2	2x12 21'-7" 2 @ 22' 88
Bottom Chord	2	2x12 21'-10" 2 @ 22' 88
End Diagonals	4	3x6 5-11½ 2 @ 12' 36
Intermediate Diagonals	6	3x4 5-8½ 2 @ 18' 36
Verticals	2	3x6 4-8½ 1 @ 10' 15
Verticals	3	3x4 4-7" 1 @ 18' 18
Bottom Chord Filler Plates	4	3x4 1'-0" 200 FBM
Hardware		
4" Dia. Split Rings	16	12 Lbs.
2½" Dia. Split Rings	22	7 "
¾"x13" Mch. Boisls, Hex Hd. & Nut	3	6 "
¾"x13" Mch. Boisls, Hex Hd. & Nut	3	3 "
Washers, 3"x3"x½" (6); 2"x2"x½" (6)	12	4 "
		35 Lbs.

FRAMEWORK			(continued)
Item	Quantity		
Plates			
Member	No.	Size Length Cul from FBM	
Center Plates	2	3x12 21'-7" 2 @ 22' 132	
Pole Top Plates (Cleats)	2	3x6 1'-0" 1 @ 8' 12	
Rear Plates	2	2x12 21'-8" 2 @ 22' 88	
Pole Top Plates (Cleats)	2	3x6 1'-0" -	
Rear Plate Filler (on Truss)	4	3x6 1'-0" -	230 FBM
Hardware			
2½" Dia. Split Rings	No.	Weight	
¾"x9" Mch. Boisls, Hex Hd. & Nut	20	6 Lbs.	
¾"x13" Mch. Boisls, Hex Hd. & Nut	3	5 "	
¾"x13" Mch. Boisls, Hex Hd. & Nut (1-¾x8")	7	14 "	
Washers, 3"x3"x½" (20); 2"x2"x½" (2)	32	12 "	40 Lbs.
Horizontal Bracing			
Member	No.	Size Length Cul from FBM	
Transverse Struts	4	4x6 20'-4" 4 @ 22' 176	
Transverse Struts	4	3x6 21'-2½ 4 @ 22' 132	
Transverse Struts	4	3x6 21'-2½ 4 @ 22' 132	
Transverse Strut Splice Plates	4	3x10 3'-4½ 1 @ 14' 35	
Bearing Blocks & Filler	16	6x8 1'-0" 1 @ 16' 64	
Verticals	10	3x8 7'-6" 5 @ 16' 160	
Vertical Bearing Blocks (Dress to 7½)	2	6x8 1'-2" 1 @ 4' 16	
Vertical Bearing Blocks (Dress to 7½)	2	4x8 2'-0" 1 @ 4' 11	
Vertical Bearing Blocks (Dress to 7½)	8	3x8 1'-2" 1 @ 10' 20	
Vertical Filler (Cut to fit Truss Dmg)	2	3x8 1'-0" 1 @ 6' 12	
Vertical Filler (Dress to 1")	2	2x8 1'-0" 1 @ 2' 3	
Diagonal Braces	6	2x6 28'-2" 6 @ 30' 180	950 FBM
Hardware			
¾"x10, 11, 12 & 13 (4 of each) Mch. Boisls, Hex Hd. & Nut	16	12 Lbs.	
¾"x18" Mch. Boisls, Hex Hd. & Nut	4	4 "	
(Continued in last column, under Miscellaneous Materials)			
One End Unit (corner utilized)- additional materials			
Wood Poles, ASDA - Class 3, 35 Ft. long, Dia @ Top-7½ Mch.			3 Each
Plates			
Member	No.	Size Length Cul from FBM	
Center Plate	1	3x12 21'-7" 1 @ 22' 66	
Rear Plates	2	2x12 21'-8" 2 @ 22' 88	
Pole Top Plates (Cleats)	8	3x6 1'-0" 1 @ 8' 12	170 FBM
Hardware			
2½" Dia. Split Rings	(Deduct)	No. Weight	
2½" Dia. Split Rings		8 - 2 Lbs.	
¾"x13" Mch. Boisls, Hex Hd. & Nut	12	24 "	
¾"x13" Mch. Boisls, Hex Hd. & Nut (Deduct)	2	- 2 "	
Washers, 3"x3"x½" (24); 2"x2"x½" (4)	20	11 "	30 Lbs.
One End Unit (corner not utilized)- additional materials			
Plates			
Member	No.	Size Length Cul from FBM	
Center Plate (Deduct 1 piece)	-	3x12 21'-7" Deduct - 66	
Rear Plates	2	2x12 21'-8" 2 @ 22' 88	Net
Pole Top Plates (Cleats)	4	3x6 1'-0" 1 @ 4' 6	30 FBM
Hardware			
2½" Dia. Split Rings	(Deduct)	No. Weight	
2½" Dia. Split Rings		12 - 4 Lbs.	
¾"x13" Mch. Boisls, Hex Hd. & Nut	6	12 "	
¾"x13" Mch. Boisls, Hex Hd. & Nut (Deduct)	4	- 3 "	Net
Washers, 3"x3"x½" (12); 2"x2"x½" (3)	4	5 "	10 Lbs.

WALLS AND ROOF				(continued)
Item				Quantity
Member				
Plates	3	2x4	22'-0"	3 @ 22' 44
Plates	6	2x4	2'-0"	1 @ 12' 8
Studs	17	2x4	12'-0"	17 @ 12' 136
Studs	17	2x4	5'-4"	6 @ 16' 64
Studs	6	2x4	6'-6"	3 @ 14' 88
Framing for Wire Partitions	12	2x4	16'-6"	12 @ 18' 108
Framing for Wire Partitions	30	2x4	5'-0"	30 @ 10' 200
Framing for Wire Partitions	24	2x4	4'-0"	24 @ 12' 64
Roofers	-	1x4	39 @ 16'	35 @ 12' 130
Bracing	62	2x12	22'-8"	62 @ 24' 2916
1"x10½ between rafters (cul from line)	-	1x3	Various	13 @ 14' 61
1x12 between rafters	-	1x12	Various	4 @ 16' 64
Sheathing	-	1x12	Random	Lengths 950 5890 FBM
Hardware				
½"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	124			50 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				70 Sheet
3-Ply, built-up Roofing				1850 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				20 Lin.Ft.
3" Dia. Aluminum Downspout (with L @ lower end)				20 Lin.Ft.
One End Unit (corner utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4	6'-6"	Deduct - 28
Studs	40	2x4	12'-0"	40 @ 12' 320
Studs	26	2x4	12'-10"	13 @ 20' 173
Studs	10	2x4	6'-10"	5 @ 14' 47
Studs	-	1x4	57 @ 14'	42 @ 12' 180
Roofers	16	2x12	22'-8"	16 @ 24' 384
Bracing	-	1x3	Various	3 @ 14' 11
1"x10½ between rafters (cul from line)	-	1x12	Various	2 @ 12' 24
Sheathing	-	1x12	Random	Lengths 570 2260 FBM
Hardware				
¾"x4½" Mch. Boisls, 3½ Mch. & Nut, 2 Washers	32			10 Lbs.
Corrugated aluminum siding, 20 gauge, 35"x6'-6"				100 Sheet
3-Ply, built-up Roofing				200 Sq.Ft.
4" Aluminum EavesTrough, 20 gauge				22 Lin.Ft.
One End Unit (corner not utilized)- additional materials				
Member	No.	Size	Length Cul from FBM	
Sill Supports-pressure treated lumber	6	4x4	3'-0"	1 @ 18' 24
Sills	6	2x4	22'-6"	12 @ 12' 96
Plates	9	2x4	22'-6"	18 @ 12' 144
Studs (Deduct 6 pieces)	-	2x4		





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